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The ILLINOIS Medical Journal

VOL. 87 NO. 2

February, 1945

In This Issue

The Present Day Status of Venereal Disease Control and Treatment

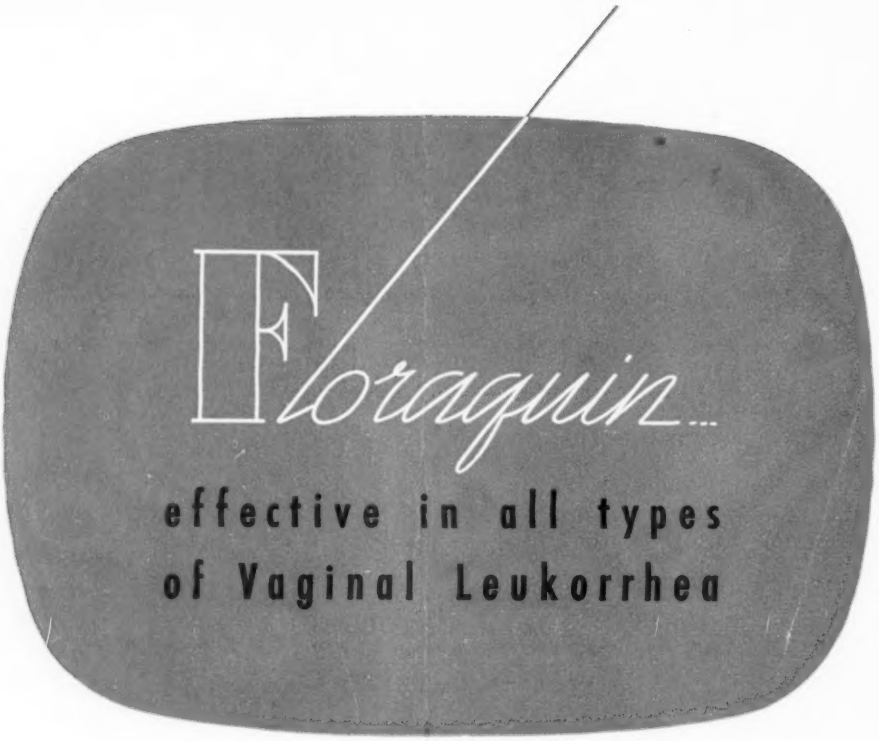
✦

Observations on The Development of Silicosis

✦

(See page 33 for Table of Contents)

OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY



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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

February, 1945
VOL. 87, NO. 2

The Illinois Medical Journal

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

Editorials

AS OTHERS SEE US

Physicians working overtime these days with so many members of their profession serving with our armed forces, have been encouraged recently by various expressions in the editorial columns of popular city papers. A recent editorial appeared in the St. Louis Globe-Democrat entitled "Spearhead of Socialized Medicine" which should be read by physicians everywhere, and copies should be available for their many friends.

The editorial is as follows:

"The drive to legislate a medical police force into every American home has begun. And, shrewdly, the proponents have tipped their spearhead with public health reforms none can deny are needed.

"This is obvious in the report of a Senate subcommittee which recommends a vast post-war program, including government loans or grants for federal-state construction of adequate urban and rural hospital facilities, expansion of state health departments, installation of needed water and sewer systems and milk pasteurization plants, extension of medical care to all recipients of public assistance, establishment of more child-guidance and mental-hygiene clinics, expansion of medical and dental education facilities and opportunities, and improvement of school health programs to correct health defects in children.

"So far, so good. These needs have been known a long time. But later the report says: "Before federal funds could be granted, however, over-all state plans and individual projects should be reviewed by the United States Public Health Service to make sure they meet certain standards." A handy stirrup to federal control. Then: "In communities where sufficient income from fees of individual patients does not otherwise appear probable, provision for group pre-payment plans, or both, should be required." This ultimately could only mean compulsory health insurance or tax-supported medicine, either of which amounts to another enforced levy on workers' earnings.

"It made no specific recommendation of the controversial Wagner-Murray-Dingell bill, except to say the subcommittee concluded that "the pay-as-you-go method of meeting doctor bills is unsatisfactory to most people". Also the report significantly made no estimate of the cost, leaving the inference it will be large.

"Although an over-all approach to such a widespread problem generally is better than a piece-meal one, the subcommittee in this instance clearly lumped undesirable with desirable reforms through fear the former cannot stand alone. There is no question the medical profession has fallen down in some aspects of its reputed mission of public service, but that doesn't mean the people therefore are willing to admit a federal foot in every doorway — a foot that can only lead to compulsory medication whenever some officeholder so decrees.

"The innovations in the report should be submitted and judged on their individual merits; otherwise the progressive reforms must go down to defeat with the others."

Another interesting editorial appeared in the December 31, 1944 issue of the Chicago Tribune under the heading, "The Wrong Weather Map", which we also will reproduce in its entirety.

THE WRONG WEATHER MAP

"A congressional committee which has been investigating the scores of hospitals already established to treat wounded soldiers has reported that for the most part the soldiers are getting the best of care. It did find some instances of maladministration, which are excusable in a rapidly expanding organization if they are corrected as quickly as they come to light.

"One thing that the committee did uncover, however, should make every citizen pause when the proposal to federalize medicine and hospitalization for civilians is brought forward. A rather wide lack of air conditioning was discovered in hospitals where it should have been installed. Operating rooms were found so hot as to be unbearable and in orthopedic wards, the report says, the sufferings of patients in plaster casts were intensified during hot weather. The congressmen attribute the lack of air conditioning where it is needed to the army's system of deciding where it should be installed.

"'It seems,' the report said, 'that for determining whether air conditioning is necessary the war department has theoretically divided the country into thermal zones which are based upon mean, high, and average low temperatures. Obviously, maximum temperatures and humidity, rather than average, should be the determining factor'."

"The army medical corps in time of war has the call on the best surgeons and hospital administrators in the country. Many physicians have left practices which yielded them handsome incomes to work for army pay. There is no lack of funds to equip hospitals and there should be no lack of equipment. And certainly the war department and the medical corps should be credited with the greatest good will in their effort to give wounded men the best treatment possible.

"Yet under these circumstances men are found suffering unnecessarily. The reason lies in the inescapable stupidity of a bureaucracy. Staff it with the smartest people in the world and its red tape would still make their combined efforts stupid. Somebody in Washington decided that the proper way to allocate air conditioning equipment was to do it by a weather map. The wrong kind of weather map was picked but nobody in the hierarchy seems to have had the initiative or the power to reverse the error made at the top, and so soldiers suffer.

"No conceivable federalized health or hospital service could expect to draw to itself even a small measure of the talents that are available to the army medical corps at present. It would still have the inescapable stupidity of bureaucracy, intensified by a permanent bureaucratic personnel whose members' chief interest inevitably becomes that of avoiding trouble, escaping decisions, and thereby continuing to draw their pay.

"A hospital might need air conditioning, it might

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need a new sterilizer, it might need additional beds, but if its need didn't fit into the preconceived notions of Washington, based on some weather map or statistical table, it wouldn't get them and the people it was expected to serve would suffer. This country is too big and too complex to be run from Washington."

The New York Times under date of January 5, 1945 had an article entitled "The Medics" which praises highly the work of the medical corps with our fighting forces.

"The 'medic' is a must in any fighting force. He is likely to combine the functions of Kipling's Gunga Din, Florence Nightingale, the Good Samaritan and the most skillful surgeon science has produced. He frequently does so at the cost of his own life. Unarmed stretcher-bearers seek out the wounded where the shells are still striking. Because they know that time is of the essence, they are always in a hurry. Sometimes a complicated operation has to be performed in a fox-hole. During the Metz offensive a 19-year-old medical aide saved a doughboy's life by cutting a fountain-pen tube into his throat with a pocket knife. But they try hard to get the victim to the nearest hospital. Maybe it is a blasted barn or an open cellar. It may be a tent over the brow of the next hill, with the surgeons operating under enemy fire. At Bastogne two or three surgeons had to handle 800 patients with nothing to dull their pain but cognac. Everybody cheered when five more surgeons got through by plane and glider.

"There is little glory in the Medical Corps. It is just hard, dirty work and mighty dangerous. The Red Cross seems to mean little to the enemy. He has bombed hospital tents from Anzio to Aachen. These medics are tough, but among the torn and dying men learn to be tender, too. They shun glory, but they have their pride. They are proud to have saved 97 out of every hundred wounded. They are proud that their miracle drugs and blood banks send from 50 to 80 back to fight again. They are proud because nobody in our whole vast Army, not even the foremost combat crew or the deadliest flying wing, has done a finer job than the Medical Corps."

Thousands of medical officers have left big practices to do their bit in the present world war. Each is interested only in doing those tasks assigned to him and giving the best possible type of service to the finest fighting forces the world has ever seen. They are not looking for glory, promotions, or anything other than to help the thousands of casualties in their program of rehabilitation.

Thousands of other physicians were found physically disqualified for active service and have endeavored to do their bit in caring for civilians, essential workers on the home front, to the best of their ability. In many communities physicians have been overworked and have died at the post, or have been compelled to slow down. In many instances they have been compelled to give up the work which has meant so much to them, yet they too are not complaining.

It is indeed most encouraging to the medical profession to see the fine tributes that are being paid through the press and elsewhere for their constant desire to carry on during warfare both at the front, in government hospitals, and in civilian practice. Likewise when the ever-increasing rehabilitation program is in operation in all states, counties and municipalities, the medical profession again will assume additional responsibilities as another "must".

CARE OF PREMATURE INFANTS

A dispassionate statement of actual results can emphasize more strongly the need for specialized management of prematures than any conceivable generalized statement of principle. Studying first an over-all picture of infant mortality in the United States as revealed by the most recently available studies, we find that 64 percent of the total 113,492 infant deaths in 1942 occurred before the age of one month, and almost half of those, or 31 percent of the total infant mortality, occurred during the first 24 hours of life. Of those babies which did not survive the first 24 hours, 99.6 percent were considered to have expired because of prematurity. In Illinois, the State taken as a whole, of the total of 5075 neonatal deaths in 1942, 35.5 percent were attributed to prematurity. However, in studying prematures as a special group, of 1303 admitted during a single twelve-month period to twenty of the large hospitals in the State of Illinois, only 25.4 percent were reported as neonatal deaths, and of the 135 prematures admitted during 1943 to the premature station at St. Francis Hospital in Peoria, only 14 percent failed to survive.

All of this statistical analysis emphasizes only one fact — the premature infant is a physical entity of a highly specialized type, and requires for survival medical and nursing management of an equally specialized degree. The premature cardio-respiratory control centers in the medulla

are extremely labile and highly sensitive to external stimuli. The premature heart and lungs in the viable infant respond violently to many stimuli which are not unfavorable to the normal newborn. The gastrointestinal tract is small and primitive to a degree which makes the feeding of a premature an exacting science and a painstaking procedure. The premature infant requires (1) an environment which is constant in temperature, humidity, and O_2 — CO_2 content; (2) feeding which includes breast milk, formulas, subcutaneous fluids, and intramuscular and intravenous blood as indicated; (3) specialized feeding by specially trained nursing personnel, using bottles, eye-droppers, and gavage technics as necessary; (4) specialized skin care by the medical and nursing staff; (5) specific emphasis and treatment by the physician of the particular types of pathology found in the premature infant; and finally, but of vital importance, (6) adequate preparation of the home and post-discharge followup of the infant's progress by the visiting nurse.

The Illinois State Department of Public Health, with the approval of the local medical societies involved, has initiated a program for the care of prematures and has had in operation for more than two years one premature station at St. Francis Hospital in Peoria and one at St. John's Hospital in Springfield, each center serving an area of 40 to 60 miles in radius, the personnel cooperating with physicians and other hospitals in the area. These centers are located at strategic points which have a high birth rate, a dense population, easily accessible highly standardize hospitals, abundant nursing personnel, and available medical attendants.

The program provides for nursing care of premature infants who weigh less than 5 pounds 8 ounces, and sets up standards of physical equipment, housing, specialized nursing, and transportation. Premature infants born in the hospital, or admitted from homes or other hospitals per incubator ambulance, are brought to the premature nursery accompanied by a nurse trained in the care of prematures. They are given 24-hour nursing service by specially trained nursing personnel. Infants admitted to the premature center remain under this specialized care until their weight level has reached 5 pounds 10 ounces or more, and are discharged only if and when their general condition is considered good and their home environment found satisfactory. Prematures whose physicians find the parents financially unable to defray the cost of hospitalization are cared for at the expense of the State. The attending physician may care for the patient himself, or if he desires, may avail himself of the service of a consulting pediatrician provided by the State Department of Public Health. Because of the successful operation of the two existing centers, the Illinois State Department of Public Health proposes the establishment and operation of other similar centers as the opportunity arises, with the approval and cooperation of the local county medical societies. It is proposed that the infant, while hospitalized, shall remain under the complete supervision of his attending physician or the designated pediatrician in charge.

In the last two decades, infant mortality rates have been dropping consistently throughout the United States, and in Illinois to an especially exemplary degree; but the lag between the drop in mortality under the age of one year and the mortality under the age of 24 hours (of which 99.6 percent is due to prematurity) is too apparent and too inconsistent for complacent acceptance. Results on the saving of life in premature stations now functioning make it obvious that a great need exists for more centers of this type, and that the opinion is well-founded that a significant drop in the infant death rate under 24 hours of age may be expected from the functioning of a sufficient number of premature stations throughout the State of Illinois.

GOOD LUCK, PLINY!

Dr. Pliny R. Blodgett, for twenty-two years a member of the Council of the Chicago Medical Society, attended a meeting of the Council at the Palmer House, Chicago, on January 9, 1945, and gave a farewell address. He had been commissioned a Lieutenant Commander in the Navy Medical Corps on December 28, 1944. Doctor Blodgett, whose home is at 1602 Otto Boulevard, Chicago Heights, was well known to most members of the Illinois State Medical Society as he has been very active over a long period of years as a member of our House of Delegates, and a member of several important

committees, and chairman of some of them during recent years.

"Pliny" as he was known to his hundreds of friends, first saw military service in the Army Medical Corps on the Mexican Border under General Pershing in 1916. Then he served over seas as a Captain in the Medical Corps during World War I, having participated in many engagements and having received several decorations.

Doctor Blodgett insisted that he must go into service again during this war, to replace his only son, 1st Lieutenant P. R. Blodgett, Jr., who served in the Army Air Forces, and was killed in an accident overseas last May.

We are informed that Doctor Blodgett is now stationed at Navy Pier, but has requested overseas duty as quickly as possible.

It is quite obvious that the many friends of Doctor Blodgett will be thinking of him, and he may be assured that the best wishes of all are his in his present or future assignments. We know that whatever these assignments may be, Pliny will do his part, and he will be welcomed home gladly when the war is over and he returns once more to his civilian practice.

PENICILLIN FOR PERITONITIS

Investigations with animals indicate that penicillin should prove to be effective as an adjunct to surgery in the treatment of battle wounds of the abdomen and appendicitis and its complications, such as peritonitis, Lieutenant Commanders G. B. Fauley and T. L. Duggan, U.S.N.R.; Lieutenant (jg) R. T. Stormont, U.S.N.R., and Lieutenant C. C. Pfeiffer, U.S.N.R., report in *The Journal of the American Medical Association* for December 30.

IMPORTANT

Send changes of address to 30 N. Michigan Ave., Chicago 2, Illinois enclosing label from a copy showing your old address. Changes received after the 1st of the month will not go into effect until the following month.

AMERICAN COLLEGE OF SURGEONS ANNOUNCES 1944 APPROVED LIST OF HOSPITALS

The American College of Surgeons announces that 3,152 hospitals in the United States and Canada are included in the 1944 Approved List. The list is published in the annual Approval Number of the College Bulletin issued December 31.

A total of 3,911 hospitals were included in the 1944 survey and the approved hospitals represent 80.6 per cent. The first annual survey in 1918 included 692 hospitals of 100 beds or over of which only 89 or 12.8 per cent merited approval. Hospitals of 25 beds and over are covered in the current surveys.

A total of 2,342 hospitals of 100 beds and over were on the 1944 survey list, and 2,182 or 93.1 per cent were approved. A total of 1,119 hospitals of 50 to 99 bed capacity were under survey of which 789 or 70.3 per cent were approved. A total of 450 hospitals of 25 to 49 bed capacity were under survey of which 181 or 40.2 per cent were approved.

On December 31 of each year the ratings of hospitals under survey by the American College of Surgeons automatically terminate. The status of every hospital based upon all data collected from the current survey is reconsidered each year.

Research in clinical tuberculosis has never been more sorely needed than now if the new drugs are to be of benefit in combating the anticipated plague of tuberculosis which is now beginning in Europe. Such research may be truly classified as "war medicine" since tuberculosis may be regarded as a specific pestilence of war along with malaria, typhus and dysentery. When the final summation of the toll of this war is made, it may be revealed that tuberculosis ranks with bombs and bullets in the destruction and crippling of civilian populations. H. C. Hinshaw, M.D. and W. H. Feldman, M.D., Amer. Rev. Tbc., Sept. 1944.

Cases of tuberculosis of the lungs due to bovine tubercle bacilli are indistinguishable clinically, radiologically or by postmortem examination from cases due to the human tubercle bacilli. Human and bovine tubercle bacilli are equally pathogenic for man. This agrees with the opinion long held by American pathologists, many of whom believe that the bovine bacillus is often more highly virulent for man than the average human strain. Roy. Comm. on Tb. of Gr. Br., A. Stanley Griffith, M.D., Chrm. 1944.

Medical Economics

The Medical Economics Committee — Chauncey C. Maher, Chmn., 6 North Michigan Avenue, Chicago, Edwin S. Hamilton, V. Thomas Austin, Emmet B. Bay, Jay McDonald Milligan, Jacob M. Mora, George Halperin, Marie Wessels, Thomas C. Browning, Roland R. Cross, Milton E. Bitter, Edwin F. Hirsch, Ford Hick, Lt. Col. MC, William J. Bryan, John R. Vonachen.

THE BEVERIDGE REPORT

The public press for two years has discussed the Beveridge Report with reference to its influence on the United States Congress and on those urging certain sweeping social reforms. This British report is the source of material contained in the Wagner-Murray-Dingell Bill, introduced in the 78th Congress and recently reintroduced in the 79th Congress as the Dingell Bill. The Medical Economics Committee believes a review of this English document should be presented to the readers of the Journal.

On June 10, 1941, it was announced in the House of Commons that Sir William Beveridge was chairman of a committee to conduct a comprehensive survey "of existing schemes of social insurance and allied services . . ." The personnel of the committee was selected from the ministries and bureaus of Labor, Home Office, Pensions, Government Actuary, Health, Treasury, Reconstruction, Customs and Excise, and Industrial Assurance. On November 20, 1942 the report was issued by the chairman, and copyrighted in December of that year by the MacMillan Company. The publishers comment on the inside cover page has interest. "THE IMPORTANCE of this report as a basis for the consideration of post war problems can hardly be over emphasized. Here, after eighteen months of intensive study by a distinguished economist and government planner is presented the first well-conceived, completely thought out preview of the social — and other — problems which must be solved throughout the world in shaping things to come."

The report under the paragraph entitled "Three Guiding Principles of Recommendations" states, "The first principle is that any proposals for the world future, while they should use to the full the references gathered in the past should not be restricted by consideration of sectional interests established in obtaining that experience. A revolutionary moment in the world's history is a time for revolutions, not for patching. The second principle is that organization of social insurance should be treated as one part only of a comprehensive policy of social progress. — Want is one only of five giants — others are Disease, Ignorance, Squalor and Idleness." The third principle is "that social security must be achieved by cooperation between the State and the individual."

The plan is summarized by the author as a scheme of social insurance against interruption and destruction of earning power and for special expenditure arising at birth, marriage and death. The scheme embodies "six fundamental principles: flat rate of subsistence benefit; flat rate of contribution; unification of administrative responsibility, adequacy of benefit; comprehensiveness; and classification." "The aim — is to make want under any circumstances unnecessary."

The population is divided into six groups: "Employees, others gainfully employed (including employers), housewives, others of gainful occupation not employed, below working age and retired above working age."

Substantially, the plan involves the collection of "contributions" to a "Social Insurance Fund" from employees, employers, and others, and the National Exchequer. The administration is to

be vested in a Ministry of Social Security, to be established. The ministry is to disburse from the fund, children's allowances (up to age 16), unemployment benefits, disability benefits (through injury or illness), retirement pensions, widows' pensions, and funds for medical treatment. Special benefits are to be allowed for marriage, births, and deaths.

The "provisional contributions" estimated in the report were approximately 0.86c (4 shillings 3 pence) per week for a single employed man (over 21) and 0.65c (3 shillings 3 pence) per week from his employer. Contributions were less for younger employees, and employed women. It was estimated by the committee that the "net addition to the burden on the National Exchequer in the first year, as compared with expenditure under the existing arrangements would be 86,000,000 lbs.

The administration is to be undertaken by a "Ministry of Social Security under a cabinet minister," who will establish a network of regional offices and these offices will select and train staffs "with special regard to their function of serving the public and in understanding the human problems with which they will be concerned."

The "provisional rates of benefit" are listed as follows:

Unemployment:	*Weekly*:
Man with non-working wife	$8.08
Man with working wife	$4.80
Single man or woman (over 21)	$4.80
Single man or woman (18-20)	$4.04
Boys and girls (16-17)	$3.03
Retirement Pension:	*Weekly*
Man with unemployed wife	$8.08
Single man or woman	$4.80
Maternity (13 weeks)	$7.27
(With Special Grant of $16.16)	
Widows Benefit (13 weeks)	$7.27
Childrens (Dependent)	$1.62
Industrial Pension	$8.08
(According to weekly earnings up to $12.12)	
Special Benefits	
Marriage benefit	$40.40
Funeral	
Adults	$80.80
10-12 yrs.	$60.60
3- 9 yrs.	$40.40
Under 3 yrs.	$24.24

HEALTH AND REHABILITATION SERVICE

The National Health Service "will ensure that for every citizen there is available whatever medical service he requires, in whatever form he requires it, domiciliary or institutional, general, specialist, or consultant, and will ensure also the provision of dental, ophthalmic and surgical appliances, nursing and midwifery and rehabilitation after accidents." The cost would be defrayed by "a proportion of the receipts of the social insurance fund. The administration of this money would rest with the health departments." The details of medical activities, such as hospital, clinic and dispensary organization, were not included in the report. The salaries of the physicians, nurses, administrators were to be worked out by the Health Department.

The Beveridge Report has received considerable favorable comment in the public press of England. In the United States, the MacMillan Company has printed about 50,000 copies of the Report and in the Chicago area over 5,000 copies were distributed up to December, 1944. The press of this country has treated the Report in many instances somewhat facetiously, labeling it — "The Womb to Tomb Plan", and, in reality it is not an impressive or profound document. Its presentation to the public as an original, finished plan is not correct. The social reforms which Sir William Beveridge offered are an integral part of National Fascism of our enemy, Germany. Our present ally, Russia, whose political philosophy differs most from our own democratic ideals has had these same ideas in operation for a number of years.

The plan implies a material decrease in the activities of the private insurance companies, and possibly their extinction. The new government bureau would become the collector, administrator and disbursing agent instead of the present fraternal, mutual or old line insurance companies.

Medically, the report proposes complete medical care for every individual under any or all circumstance. It does not indicate, however, that acceptance of that medical care is *compulsory*, and implies that private medical prac-

(*Continued on page* 98)

Correspondence

SPRING REFRESHER COURSE

The 5th semi-annual refresher course in laryngology, rhinology and otology will be conducted by the University of Illinois, College of Medicine at the College in Chicago, March 26 to 31 inclusive, 1945. While the course will be largely didactic, some clinical instruction will be included. This course is intended primarily for ear, nose and throat specialists. As the registration is limited to thirty, applications will be considered in the order in which they are received. The fee is $50.00. When writing for application please give details concerning school and year of graduation, and past training and experience.

Address — Dr. A. R. Hollender, Chairman, Refresher Course Committee, Department of Otolaryngology, University of Illinois, College of Medicine, 1853 West Polk Street, Chicago 12, Illinois.

ILLINOIS INITIATES, AMERICAN COLLEGE OF SURGEONS

The following physicians from Illinois were accepted into fellowship in the American College of Surgeons during 1944:

Burton R. Bancroft	Oak Park
John G. Bellows	Chicago
Ernest D. Bloomenthal	Chicago
Hubert B. Bradburn	Lincoln
Arthur R. Brandenberger	Danville
Paul A. Campbell	Chicago
Dwight E. Clark	Chicago
Harlan S. Cox	Danville
John M. Dorsey	Chicago
Howard E. Dorton	Chicago
Lester R. Dragstedt	Chicago
Reuben B. Gaines	Chicago
Richard K. Gilchrist	Chicago
Carl Greenstein	Urbana
Harry G. Hardt, Jr.	Chicago
Richard E. Heller	Chicago
Allan B. Hirschtick	Chicago
Samuel I. Kaufman	Chicago
Frederick J. Lesemann, Jr.	Chicago
Arthur B. Levan	Chicago
Martin C. Lindman	Rockford
Wallace D. Mackenzie	Evanston
Robert T. McElvenny	Chicago
George T. Murphy	Chicago
Harry A. Oberhelman	Chicago
Eugene B. Perry	Chicago
William Rosenberg	Chicago
William G. Rurik	Chicago
John C. Scully	Chicago
Charles E. Shannon	Chicago
Edgar A. Thacker	Urbana
Malcolm C. Todd	Cairo
Isadore C. Udesky	Chicago
John Van Prohaska	Chicago
Charles A. Waltman	Chicago
Lorin D. Whittaker	Peoria

In China disease is much more prevalent than it is here. Cholera is reported every year; there were 100,000 cases in 1932, 65,000 cases in 1942, 17,000 cases in 1943. Bubonic plague had approximately 6,000 cases in 1942. It is estimated that there are about 6,000,000 cases of dysentery annually, 90 per cent bacillary, 10 per cent amebic. The estimated number of cases per annum of typhoid fever is 700,000; of smallpox, 500,000; of diphtheria, 360,000; of scarlet fever, 180,000. Epidemic meningitis is estimated at 100,000 cases per annum; malaria, 21,000,000 cases per annum; schistosomiasis, 10,000,000 cases per annum. Active tuberculosis is estimated at 36,000,000 cases, 8 per cent of the population. Under-nutrition is so widespread that no figures of any kind are available. Raymond B. Fosdick, L.L.D., Amer. Jour. P. H., Nov. 1944.

★ BUY AN EXTRA BOND ★

Medicine's Role in the War Effort

MR. PAUL V. McNUTT PRAISES CIVILIAN DOCTORS

Urging conservation of the nation's diminished ranks of civilian doctors, Mr. Paul V. McNutt, chairman of the War Manpower Commission, recently praised the home front medical corps for "a gallant contribution to the war effort at great sacrifice." The War Manpower Commission Procurement and Assignment Service has charge of the assignment of professional men for the war period.

Pointing out that about 1,500 physicians had died on the home front from Jan. 1, 1944 to July 1, Mr. McNutt said that "all over the nation our doctors are sacrificing themselves to help us do a magnificent job. It is necessary that all of us cooperate with the medical profession in order to keep to a minimum the demands of our physicians." Mr. McNutt also said that civilians could cooperate by observing ordinary health rules and diets, calling a physician only when necessary, going to the physician's office when possible rather than calling him to the home, and placing calls early so that physicians may systematize their work and save their own strength.

Procurement and Assigment Service officials said that, when there is real need for additional doctors in a community, WMC tries to fill the need through relocation of physicians and with those returning from service. About 200 physicians are now back in their communities from the Army, which recently reported to WMC that it is no longer recruiting doctors. About 3,000 are still needed by the Navy and a smaller number for the Public Health Service, the Federal Security Agency and the Veterans Administration.

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"LUXURY" PRIVATE NURSING DEMANDS CRITICIZED

Hospital officials called together by the Nursing Council for War Services have criticized the continued demand for "luxury" private duty nursing, with the Army and Navy in urgent need of 14,000 additional nurses. A public meeting planned by the Graduate Nurses' Association for January will emphasize the drastic shortage of nurses for the armed forces and at the same time honor nurses with overseas service. The need for nurses is so acute that Congress may be asked to investigate the shortage, which has resulted in eleven general hospitals being sent abroad during December with no nurses in their personnel. Congressmen back from overseas were indignant that sufficient nurses are not available to care for the wounded. They have made the charges (1) that civilian hospitals are "hoarding" nurses and (2) that superintendents and other hospital officials are threatening nurses that if they join the armed forces they will not be allowed to rejoin the hospital on their return to civilian life.

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WAC RECRUITMENT TO CONTINUE IN 1945

The War Department recently announced that the army will continue to recruit for the Women's Army Corps in 1945. Because of the increasingly high casualty lists and the return of thousands of sick and wounded soldiers to the United States, together with a critical shortage of army nurses, there is an urgent continuing need for several thousand medical and surgical technicians in army hospitals. This need is acute and must be filled. Women enlisted in the WAC for this duty will receive specialized training designed to fit them as enlisted technicians and are assured duty in army hospital wards aiding in the care of sick, injured and wounded soldiers. Other enlisted technicians needed by the Army Medical Department include pharmacists, laboratory technicians, dental technicians and psychiatric social workers.

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TUBERCULOSIS IN THE ARMY

The incidence of tuberculosis, as reflected by the annual hospital admission rate, is only one tenth as high in the army now as it was in the first world war. The principal factor in the decrease in the army rate is the screening process which is in operation to exclude men with active or potentially active tuberculosis before they are inducted into the Army, Col. E. R. Long, chief consultant on tuberculosis for the Surgeon General's Office, pointed out. Another reason is the fact that among the civilian population tuberculosis is only one third as prevalent now as it was during the first world war.

ARMY AWARDS

Six officers of the medical detachment of an armored infantry regiment have received awards from the War Department for meritorious and gallant service on the field of battle during the campaigns of the Second Armored Division in Germany.

Winner of the Bronze Star Medal was Capt. Harry M. Segenreich, Chicago, who was graduated from the University of Illinois College of Medicine, Chicago, in 1937 and entered the service Feb. 11, 1941.

Capt. Garland N. Adamson, surgeon of a tank battalion and formerly of Chicago, was recently awarded the Bronze Star Medal "for heroic achievement in connection with military operations against an enemy of the United States in France, on Nov. 11, 1944. . . ." Dr. Adamson graduated from the Meharry Medical College, Nashville, in 1922 and entered the service in November 1942.

The Bronze Star Medal was recently awarded to Capt. Maurice Stamler, formerly of Beardstown, Ill. The citation read, "On Oct. 26, 1943 in Italy he moved through an enemy artillery concentration which was falling at the rate of eight rounds per minute to the aid of three seriously wounded infantrymen who had been struck by fragments of an enemy shell. Arriving some time before his ambulance he worked forty-five minutes with enemy shells bursting within 50 yards of him, administering aid to these wounded men. On arrival of the ambulance after the enemy artillery fire had ceased he directed their evacuation. His utter disregard for personal safety in this gallant action is deserving of the highest praise." Dr. Stamler graduated from the University of Illinois College of Medicine, Chicago, in 1934 and entered the service Aug. 21, 1941.

Capt. Mark M. Pomaranc, formerly of Chicago, was recently awarded the Bronze Star Medal. The citation read, "At Dutch New Guinea, from April 20 to June 12, 1944, he distinguished himself in the performance of his duty as a surgeon of a task force. His untiring efforts in administering to the sick and wounded at advance outposts was a direct contribution to the high combat efficiency of the patrols. Working under hardships in combating jungle diseases, handicapped by supply, evacuation and communication problems, he succeeded in maintaining a high standard of health and sanitation." Dr. Pomaranc graduated from Northwestern University Medical School, Chicago, in 1941 and entered the service Jan. 5, 1942.

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HOSPITALIZATION OF RETURNING CASUALTIES

Major Gen. Norman T. Kirk, Surgeon General of the Army, recently stated that the large increase in casualties returning from the battlefronts is making it impossible to send all patients to hospitals near their homes. General Kirk said that more than 30,000 sick and wounded were brought back to this country in December — an increase of 300 per cent over July. The three principal factors which guide the medical department in the selection of the hospital to which a soldier is sent are:

1. Where can the patient get the best treatment for his particular case?
2. What hospitals offering such specialized services have the facilities to care for additional cases?
3. What suitable and available hospital is located nearest to the soldier's home?

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REDUCTION IN THE MEDICAL CORPS OF THE ARMY

The Office of the Surgeon General recently announced that a moderate reduction in numbers of Army Medical Corps officers is necessary in order to remain within the present allotted ceilings. The need for medical corps officers in senior grades who are assigned principally to administrative duties is less acute than formerly. A board of officers recently appointed in the Office of the Surgeon General is carefully considering the physical and other qualifications of all medical corps officers of the various components of the Army and their essentiality to the war effort. As a result of this board's study, it is anticipated that a number of separations of the aforementioned group will occur in the near future. Regular medical corps officers will be accorded retirement privileges under the provisions of section II, Ar. 605-245, June 17, 1941, and Reserve, National Guard, and A. U. S. Medical Corps officers will be given the opportunity of returning to the practice of medicine in a civilian status by relief from active duty or discharge.

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COMBAT PAY FOR MEDICAL UNITS

Many will welcome assurance that the War Department is giving its attention to additional recognition for men of the Medical Corps serving with combat units. General Eisenhower has recommended to visiting congressmen, says a report from France, that he be given extra combat pay comparable to that of the combat unit he serves.

Secretary Stimson indicates that the case of the man of the Medical Corps presents a separate problem because of his non-combat status under the Geneva Convention, but separate insignia and a separate pay system would seem to clear that hurdle. The Secretary noted also that more Medical Corps men receive technical ratings, thus boosting average pay, but that doesn't help the medic who hasn't his rating or compensate the corps generally when it leaves a safe spot for the shooting front.

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RECRUITING STUDENT PHYSICAL THERAPISTS

Recruiting of student physical therapists has been started by the war department. After an apprenticeship in army hospitals qualified graduates will be commissioned as second lieutenants in the Medical Department. Applicants must be under 38 years of age,

must be college graduates with a major in physical education or biologic science, must meet citizenship and physical requirements and must have no dependent children under 14 years of age. Such applicants will start at a salary of $1,440 a year; on satisfactory completion of six months training in army general hospitals, students become apprentice physical therapy aides at a yearly salary of $1,620. Applicants who have had a similar course in civilian institutions will be eligible for this position. On satisfactory completion of their apprenticeship they will be commissioned as second lieutenants. They may be placed on duty overseas or in this country.

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COL. ALBERT E. McEVERS COMMANDING OFFICER AT BILLINGS GENERAL HOSPITAL

Col. Albert E. McEvers, formerly commanding officer of the ASF Oakland Regional hospital, was recently appointed commanding officer of Billings General Hospital, Fort Benjamin Harrison, Indiana. An army surgeon veteran of three wars, Dr. McEvers first saw action on the Mexican border in 1916 and served as a surgeon during the major offensive at Aisne-Marne, St. Mihiel, the Neuse-Argonne, Champagne and Meuse-Champagne during the first world war. After returning to the United States he was appointed major in the Officers' Reserve Corps and practiced in Chicago and Los Angeles until the outbreak of the present war. He received his full rank of colonel in the medical reserve in 1934. In September 1939 he accepted reappointment to this rank.

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THE CONTROL OF DENGUE ON SAIPAN

Shortly after the invasion of Saipan an epidemic of dengue fever occurred among the troops employed in the operation. The rapid increase in the incidence of the disease necessitated prompt control measures. The island commander, on recommendation of the surgeon, designated each unit commander as responsible for the elimination of mosquito breeding within his assigned area and its immediate vicinity. Under the direct supervision of the surgeon a sanitary company undertook mosquito survey control work in the more thickly populated areas.

The portions of the island inhabited by our military forces were mapped and segmented as to areas of importance. Tremendous quantities of debris were removed and vast areas were cleared. Water pools were oiled, water containers were emptied or otherwise protected from mosquito breeding and tree holes were filled with dirt. All measures for mosquito protection were enforced to the utmost. A solution of DDT was used extensively as an insecticidal spray disseminated by mechanical power sprayers and by airplane. All tents, living quarters and mosquito bars over a wide area were sprayed for a residual effect. Area spraying by aircraft was thoroughly exploited over wide territories. The effects of these procedures were dramatic. The reduction in the larval and adult mosquito population and in the flying population was enormous. Within two weeks of the onset of the control program daily admission of new cases of dengue fell more than 80 per cent, and progressive improvement has occurred since that time.

This experience serves to reemphasize the effectiveness of command action in disease prevention when promptly utilized and efficiently employed under Medical Department recommendations. It further attests the value of DDT as an adjunct to other sanitary measures in the control of insect borne diseases.

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NEW POSITIONS OPEN FOR EXPERT LIMB FITTERS

Army amputation centers in this country are in immediate need of expert limb fitters. Civilians with the necessary technical background in manufacturing, adapting, repairing or fitting orthopedic appliances are being urged by the Army Medical Department to qualify for the newly created positions of "orthopedic technical advisers." These are Civil Service positions.

A technical adviser grade P-4 receives a yearly salary of $4,428 for a forty-eight hour week. He serves as consultant and adviser to the orthopedic surgeon on the design and construction of artificial limbs and counsels individual amputees on their use. A technical adviser grade P-3 receives a yearly salary of $3,823 for a forty-eight hour week and acts as assistant, performing specific research, designing and fitting limbs and training enlisted shop personnel.

Orthopedic shops are located at the six Army general hospitals which are amputation centers: Bushnell General Hospital, Brigham City, Utah; Thomas M. England General Hospital, Atlantic City, N. J.; Percy Jones General Hospital, Battle Creek, Mich.; Lawson General Hospital, Atlanta, Ga.; McCloskey General Hospital, Temple, Texas, and Walter Reed General Hospital, Washington, D. C.

Inquiries should be directed to the Civil Service Commission or the Office of the Surgeon General, Washington 25, D. C.

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NUTRITION LABORATORY NOW IN CHICAGO

The Medical Nutrition Laboratory, formerly part of the Army Medical School, Army Medical Center, Washington, D. C., has moved to 1849 West Pershing Road, Chicago 9. Capt. George Berryman, Sn. C., is the acting commanding officer, and Capt. Cyrus French, Sn. C., is executive officer. A new laboratory is being constructed, and the scope of the work will be increased. In addition to training nutrition officers there will be physiologic, chemical and bacteriologic studies made of nutritional problems pertaining to army personnel.

Original Articles

THE PRESENT DAY STATUS OF VENEREAL DISEASE CONTROL AND TREATMENT

A. J. Aselmeyer, Senior Surgeon
U. S. Public Health Service

Venereal disease control today is everybody's business. We are engaged in an "all out war." Our number one need as a nation is manpower. We must keep industrial production at its maximum to win over the Axis. We must prevent loss of time because of venereal disease.

In Illinois last year syphilis and gonorrhea comprised practically a third of all the illnesses reported to the Illinois Department of Public Health. Nationally, examination of the first 2,000,000 selectees revealed that 47.7 men out of every 1,000 had serologic evidence of syphilis. On the basis of this data and other studies, the total syphilis prevalence in the United States in 1941 was estimated to be well over 3,000,000. The chances of the average American citizen for acquiring syphilis by the age of 50, at the rates existing in 1940 and 1941, was 1 in 15. The general belief held by most authorities is that the gonorrhea attack rate is at least three times higher than the syphilis attack rate.

Syphilis became epidemic in western Europe about 1493. The next 400 years of medical research produced accurate descriptions of the course of the disease, and mercury and guiacum for the treatment of external symptoms, but nothing more basic. In 1900 syphilis could not be accurately diagnosed and was still listed among the incurable diseases.

The first decade of the 20th century brought forth momentous discoveries. In 1903 Metchnokoff and Roux produced syphilis in apes by inoculation. In 1905 after long years of searching Shaudinn and Hoffman discovered the syphilis organism known as the spirocheta pallidum. In 1907 Wassermann developed a complement fixation test. Then in 1910 Paul Erhlich discovered salvarsan, and arsenic compound which would kill the spirochete and not harm the patient when injected into the blood stream. Thus in the short span of ten years we were given the means of diagnosis and a new method of treatment. Erhlich thought that one dose would cure syphilis. This early belief was soon proved untrue. Then syphilologists throughout the world developed empirically their own systems of treatment, with varying and unpredictable results.

In the years since those epic discoveries the sero-diagnostic test has been improved and made an accurate instrument of diagnosis. We can now find syphilis when it is hidden. The cooperative clinical group study of 75,000 case records, under the sponsorship of the U. S. Public Health Service, has enabled us to predict with considerable accuracy the results of specific amounts and types of treatment in early and latent syphilis. The system of treatment for early syphilis announced by the cooperative clinical group in 1935 was the most effective which had yet been devised, and if completed one of the most effective treatments known for any disease so serious as syphilis.

Presented before the Joint Session of the Sections on Medicine, Surgery, Public Health and Hygiene, Radiology, Pediatrics, Obstetrics and Gynecology, and Pathology, 104th Annual Meeting of the Illinois State Medical Society, May 17, 1944.

This schedule requires twenty doses of an arsenical and a like number of heavy metal — one injection each week for forty weeks to control infectious relapse. Thirty doses of an arsenical and forty doses of heavy metal, one injection each week for seventy weeks, is the minimum treatment required to attain permanent satisfactory results.

Painstaking epidemiological work has demonstrated that syphilis occurs in small epidemics.

The disease is spread by intimate contact of a well person with one who had recently acquired the infection. These epidemics can be traced, the source ascertained and further spread of the disease prevented by placing the infected persons under treatment.

We have known the cause of gonorrhea since Neisser identified the organism in 1879. We have had no effective treatment suitable for general application until the advent of the sulfa drugs in 1937. Data accumulated during the past few years led us to believe that the sulfonamides would cure 80 to 90% of uncomplicated cases of gonorrhea in a period of five to ten days. More recent experience indicates that the percentage cure is somewhat smaller, probably about 60 to 65% under ordinary treatment conditions.

We know that gonorrhea like syphilis is spread by intimate personal contact. Discovery of an effective treatment has given us the means of controlling this malady also. Our medical problem therefore, based on established scientific data, resolves itself into finding new cases and treating them.

In every field of endeavor there is always a lag between the acquisition of knowledge and its practical application. This lag has been greater in syphilis than in other ailments. The association of syphilis with sin, which until recent years banned public mention of the word, made it difficult for health officers to deal with the problem.

The blueprint for the present program was drawn at a special conference held in Washington in December, 1936, under the auspices of the U.S. Public Health Service. After this conference articles on venereal disease appeared in newspapers and magazines. Radio networks permitted speakers to use the word "syphilis" in broadcasts. Civic minded groups throughout the country endorsed the program.

In 1938 the Congress enacted legislation making Federal funds for venereal disease control available to the States. Each of the 48 States immediately began to develop a plan based on the recommendations of the Advisory Committee, which embodied the best features of successful control efforts in other countries.

Briefly, the objective of the venereal disease control program is to provide facilities, services and policies adequate to meet the problem. Federal funds are allotted to the States to supplement local resources. The responsibility for developing and maintaining adequate control measures rests with State and local health organizations. Federal participation consists mostly of technical and administrative guidance. The Venereal Disease Division of the Public Health Service also conducts laboratory and field research, training and demonstration programs, provides advisory and consultative services, and lends specially trained physicians, nurses and other workers to the States to meet acute problems growing out of the war.

In assuming the responsibility for dealing with the venereal disease problem, health officers are merely following the precept laid down by Dr. J. Marion Sims in his presidential address before the meeting of the American Medical Association in 1876 ". . . . I would simply include syphilis in the great family of contagious or communicable diseases and make it subject to the same laws and regulations that we already possess for their management. . . . "

Great progress has been made since the passage of the National Venereal Disease Control Act. The venereal disease clinics in the United States increased from 1,122 in 1938 to 3,800 in 1943. In 1938, 3,598,000 blood tests for syphilis were performed; in 1943 that number had increased to 30,900,000. In 1939 the monthly average of syphilis clinic patients was 229,000; now at least 400,000 are being treated each month. The number of arsenical doses for the treatment of syphilis distributed by State Health Departments increased from 2,800,000 in 1938 to 10,800,000 in 1943. The number of doses of sulfa drugs distributed increased from 3,500,000 doses in 1939 to 23,100,000 in 1943.

War breaks up families, tears people loose from their usual surroundings and normal ways of life, weakens normal restraints among young

people, and thus creates conditions which favor promiscuity and the spread of venereal disease. To make the situation even more complex, the ever increasing shortage of professional personnel overshadows all other difficulties in the successful application of venereal disease control measures.

Health officials, (Federal, State and local) private physicians, the Armed Services, law enforcement officials, and voluntary agencies have combined forces to control the spread of venereal disease under difficult war time conditions.

The Social Protection Division of the Federal Security Agency's Office of Community War Services, has been very helpful in the repression of commercialized prostitution. More than 660 red light districts have been closed. With the help of the American Bar Association this agency has obtained interpretations of health laws and regulations which have been very helpful to health officials in the exercise of quarantine powers.

The American Social Hygiene Association has made confidential investigations of prostitution activities in more than 500 communities during the past year. In fact, this association, which represents voluntary organizations interested in venereal disease control, has devoted its entire budget to the war program.

The F. B. I. and local police officials have shown a keen interest in the venereal disease problem and are willing to take action where law violations are involved.

The Alcohol Beverage Commission and a majority of the tavern keepers are aiding the control program by refusing to permit customers to use their premises for meeting prospective patrons.

The Army and Navy are fulfilling their obligation, under the 8 Point Agreement, by adopting a program for the repression of prostitution and reporting venereal disease contacts to proper health officials.

To conserve the time of depleted professional staffs, lay follow-up workers are being employed. Loss of time and effort in searching for old cases which are no longer infectious and for individuals who are already under treatment is being prevented through the use of central registries.

All of us engaged in the field of public health know that in the final analysis the control of venereal disease is in the hands of the private physicians. Public agencies can provide funds, develop plans and procedures and set up administrative machinery, but the physician sees the patient. He must make the diagnosis and administer treatment. To aid him laboratory services, drugs and follow-up services are provided.

Physicians continue to staff venereal disease clinics even though they hardly have time to care for their private patients. More and more physicians are realizing the advantage of reporting cases promptly. In Illinois the syphilis case reports for 1943 reached an all time annual high figure of 28,680 and the gonorrhea case reports soared to the State's record breaking peak of 21,580. Prompt reporting of a new case secures for the physician free drugs for the treatment of his patient, and gives the health officer information necessary to plan an effective program.

In Springfield and Chicago rather complete files are maintained on all persons reported as having or suspected of having venereal disease. A new patient coming to a physician may be a contact reported by some other treatment source. If you have reported this case and the health department knows that the suspect is under your care, no follow-up visit will be made. Thus reporting the case helps you in your patient relationship and obviates the necessity of an investigation to determine the status of this suspect.

The physician in private practice is assuredly doing his part in the war effort. He can greatly enhance his contribution to venereal disease control by a determination to see to it that every case of venereal disease which comes to his attention remains under treatment at least until he is no longer infectious. A few moments of precious time devoted to instructing each new patient will pay dividends. If the patient knows that continued treatment is necessary and that the physician has an obligation to the community to report cases which lapse while still infectious he will be more inclined to continue treatment.

A prompt report to the health officer if he does lapse prematurely is the signal which starts procedures to return the patient to his physician or

some other source of treatment. Such teamwork serves the best interests of the patient, the physician and the community.

The majority of venereal infections among military personnel and presumably also among civilian workers are now being acquired from promiscuous pickups. Such individuals have little social responsibility and are notoriously difficult to treat effectively in out-patient clinics. They move about frequently to follow some man in the armed services or to seek employment. They are difficult to locate and if found and placed under treatment frequently disappear before they have become non-infectious. In fact only about 25% of all patients with early syphilis admitted to clinic services remain under continuous treatment for sufficient time to receive 20 injections each of an arsenical and a heavy metal — the minimum necessary to insure against infectious relapse.

To cope with this problem the Federal government and a number of State health departments have developed a cooperative program to provide facilities in which persons with infectious venereal disease can be isolated and given intensive treatment. Professional staffs are furnished by the State or local health departments, or the U. S. Public Health Service. All other maintenance costs in most instances are financed from funds provided by the Federal Works Agency under the provisions of the Lanham Act. To date 35 State and 7 Federal rapid treatment centers have been established. 30 to 40 more are contemplated. Every effort is being made to operate these centers as hospitals for sick people and not jails for law violators.

The State Health Department of Illinois, in cooperation with the State Department of Public Welfare, has provided facilities for the isolation and treatment of persons with infectious venereal disease in five of the State mental hospitals. Patients who have venereal disease in a communicable stage may also be hospitalized in a number of private hospitals throughout the State upon authorization of the State venereal disease control officer.

In Chicago, the old Wesley Memorial Hospital is being operated as an intensive treatment center by the Chicago Board of Health. Patients with syphilis in a communicable stage and sulfa-resistant gonorrhea are promptly admitted to this center for intensive treatment.

The various treatment schemes employed for syphilis in the rapid treatment centers consist of (1) the five day slow intravenous drip, (2) the five day rapid intravenous drip, (3) the multiple injection, (4) the one day chemo-fever therapy, (5) the eight day chemo-fever therapy with vaccine and (6) more recently the so called "wonder drug" penicillin. The medical officer determines the type of treatment in each instance on the basis of physical findings, duration of infection, previous treatment, and the equipment and professional personnel available.

At the request of the various official and unofficial agencies concerned, the Public Health Service has undertaken to appraise the efficiency of the various methods of intensive therapy. Standardized medical reports on all cases treated are being submitted to the Venereal Disease Division of the Public Health Service. This program has not been in operation long enough to accumulate sufficient data to justify evaluation of the various treatment schemes employed.

To date the incomplete data on this large scale experience in the various intensive treatment methods and reports of various investigators throughout the country indicate that the one day and the five day treatment should be restricted to institutions where a well trained staff is available. The mortality rate is approximately one fatality for every 250 cases treated. When the period of time in which approximately the same amount of drug is given is lengthened, the safety factor increases proportionately. In the twelve-weeks treatment described by Doctor Harry Eagle the fatality rate is about one in 1500.

Early reports on the use of penicillin are very promising. Some investigators report as high as 99% cures in sulfa-resistant gonorrhea.

In early syphilis penicillin therapy produces prompt healing of surface lesions and a gradual decrease in positive serologic titre to the point where the test becomes negative. If further observations confirm the results thus far obtained, we may be witnessing a complete revolution in syphilis therapy.

The advantages of intensive treatment, from the standpoint of controlling infection, become readily apparent by comparing the number of

patients discharged from clinics as having received maximum benefit, with the number discharged from intensive treatment centers. During the period July 1 to December 31, 1943, 392 patients who had early syphilis were discharged from the clinics of 5 states in this area as having received maximum benefit of therapy. During the same period one intensive treatment center in this area placed 1,042 cases of early syphilis under observation after having received maximum therapy. It should be remembered also that the patient who is treated in the hospital is out of circulation and cannot spread infection during the period that treatment is being given.

The venereal disease control program is a cooperative effort geared to scientific research and methods of application which have been fruitful in actual practice. Current reports indicate that thus far our combined forces have prevented any considerable increase in venereal disease. We hope that continued teamwork, sustained effort, and the application of new methods and techniques will enable us to hold this position under difficult wartime conditions.

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The pre-placement examination of the worker opens what is probably the most fruitful opportunity to control the hazards of tuberculosis in industry. Here the suspected case is either thoroughly studied and carefully placed or he is haphazardly placed into a type of work in which latent tuberculosis lesions will flourish into full activity. Here, also, is the point of entry for the frankly tuberculous undetected by a hasty and incomplete examination, or here we find the protective wall which the physician interposes between the workers already employed and the tuberculous individual seeking admission among them. T. Lyle Hazlett, Indus. Med., Mar. 1944.

OBSERVATIONS ON THE DEVELOPMENT OF SILICOSIS

HAROLD E. DAVIS, M. D.
CHICAGO

Pneumoconiosis is a general term describing all forms of pulmonary changes due to all types of dust, and silicosis is a specific form of pneumoconiosis believed to be due to the specific action of silicon dioxide. The field of pneumoconiosis or even silicosis is too large to be covered in such a short period of time, and therefore I have limited my discussion to certain phases of silicosis which may give a clearer understanding of some of the problems of silicosis.

It is believed that essentially all of the lung changes due to silicon dioxide and called silicosis are demonstrable on an x-ray film. It is also believed that there are, undoubtedly, minimal amounts of silica or silicon dioxide in many lungs which do not produce roentgen evidence of their presence because there has been very little, if any, change in the pulmonary structure. It is furthermore accepted that roentgen examination should always be considered as a consultation and that all of the physical factors must be taken into consideration in arriving at a conclusion. Pendergrass who gives an excellent discussion of this subject lists the following points as essential for the proper diagnosis of silicosis:

"1. A knowledge of the anatomy of the chest and some of the physiological manifestations of the various structures contained therein; an understanding of the histology of the lungs and of their lymphatic system.

"2. A thorough familiarity with roentgenoscopic and roentgenographic appearance of the normal structures of the chest and their permissible variations.

"3. A clear perception of the pathology of pneumoconiosis and of lesions that give a somewhat similar roentgenographic appearance.

"4. Some knowledge of the history of the individual, especially the occupational record and familiarity with the physical signs in the particular patient.

"5. Some information concerning the industrial process that is responsible for the produc-

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Presented before the Section on Radiology, 104th Annual Meeting, Illinois State Medical Society, Chicago, May 16, 1944.

tion of the dust. Dust counts at breathing levels and chemical analyses of the dust are exceedingly important when available.

"6. A comprehensive roentgen examination."

In order to produce lung changes the silica dust particles must reach the lung alevoli and pass into the interstitial tissues either with-macrophages (dust cells) or by way of alveolar pores and be deposited in sufficient concentration and either through a physical-chemical reaction or some unknown process produce an abnormal amount of fibrous tissue. It is also accepted that only the smaller silica particles, particles of the order of 0.5-2.5 microns in size, are likely to produce lung damage. The protective mechanism of the respiratory tract, the main bronchus, and the bronchioles eliminates and excludes most of the larger particles of material, and the microscopic calibre or dimensions of the alveoli are such that only the smaller particles are physically possible to enter the alveoli. I am sure we have all been impressed with the wide variation of incidence of development of silicotic fibrosis in American industry. Few of us in the Illinois area have had any major experience with workers exposed to underground inhalation of silica. The physical factors surrounding underground operations in hard rock mines where silicon dioxide is produced free in the atmosphere are entirely different from surface operations in most of our plants. My experience has been confined almost exclusively to foundry workers. Our modern American foundries have taken many steps to improve the hygiene of foundries to reduce the accumulation of dust and to prevent the inhalation of this dust in the more serious concentrations. Some investigators believe that certain dusts have a modifying effect on the action of free silica in the lung. For instance, aluminum oxide may retard and alkaline soap powders may accelerate the usual reaction to free silica. It has been suggested that rapidly developing cases may be due to excessive exposures to silica and especially silica of unusual fineness.

There are two probable methods of action of the silicon dioxide: 1. A simple foreign body reaction and 2. a chemical reaction. Discussing a foreign body reaction first, I believe it hardly reasonable that fine dust particles of sufficiently small size should produce pulmonary changes by foreign body reaction with only one kind of dust or essentially only one kind of dust when the great majority of other types of dust of the same fineness produce no demonstrable pulmonary change. In the theory of chemical reaction of silicon dioxide, the silicon dioxide takes up moisture and forms a silica gel probably with the formation of silicic acid. This gel then becomes surrounded with a reaction which eventually becomes a dense nodule. The availability of moisture to combine with the silicon dioxide is of marked importance in producing a chemical reaction. I am sure we have all been impressed with the fact that of many workers under exactly the same conditions in the same plants in our surface operations in the midwest with years of exposure, only a percentage of individuals develop changes which could be definitely diagnosed as a nodular silicosis. We have noted many instances in which a degree of silicosis has been developed and then has remained stationary for many years without evidence of change of progression. We have also noted instances of definite nodular fibrosis with a presumable diagnosis of silicosis occurring without evidence of tuberculosis and without development or activation of tuberculosis at a later date. Pendergrass stated that the knowledge that a worker is exposed to dust released in the processing of a material containing free silicon dioxide is insufficient evidence in itself to justify the statement that the atmosphere at the breathing level contains harmful quantities of free silica dust. Briefly this means that all men who are exposed to small amounts of free silica dust do not necessarily develop demonstrable silicosis.

The factors concerned and the variations of the behavior of dust were ably tabulated by Pendergrass as follows:

"1. The composition of the air borne dust may differ from that of the parent material.

"2. The composition of the dust retained in the deeper portions of the lung may differ from that of the air borne dust.

"3. The amount of dust retained in the respiratory system and the relative amounts retained in the upper portion of the tract and that found in the alveoli vary with different dusts.

"4. The particle size of the alveoli dust differs from that of the air borne material.

"5. The flocculating properties of dust vary; this affects the retention in the respiratory tract, its penetration to the alveoli, and the behavior of phagocytes toward the dust.

"6. The rate of phagocytosis varies from one dust to another.

"7. The toxicity of silica is apparently reduced in the presence of certain other materials."

The protective influence of the respiratory system is of prime importance in considering the variations in the development of silicosis. The amount of dust reaching the alveoli and the common factors in the production of silicosis are varied as follows:

1. By the frequency and depth of breathing.

2. By the efficiency of the upper respiratory tract in eliminating or excluding fine dust particles referring especially to protective ciliary action.

3. By the physiology of the respiratory tract in the given individual particularly the nasal structures and whether or not the individual is a mouth breather.

Accepting the physiological-pathological development of silicotic nodules, once the silicon dioxide particle has reached the alveolus we must also accept the lymphatic distribution of the silica particles. It is still necessary to explain why silica dust produces a nodule while most other dusts do not. If it were on simply a foreign body particle basis, all dust particles should be expected to produce nodules, and it has been observed that this is not the case. The alternative then to be considered is a chemical reaction. This chemical reaction has been well studied by Denny, Irwin, and their associates.

If we should investigate all of the individual physiological and pathological variables, I believe that we would be forced to arrive at a theoretical explanation of why certain individuals develop silicosis in a given environment while others do not. Certainly it can be accepted that there is a great variation in the capacity of respiratory cilia in excluding dust particles. This capacity may be influenced by type of breathing in the individual, the amount of nasal cilia or their efficiency, and the efficiency of the bronchial and bronchiolar cilia. Any inflammatory change in the mucosa lining the bronchi or bronchioles would have a tendency to retard or limit this ciliary activity, thereby reducing its efficiency. These inflammatory changes may be (1) specific tuberculous infection with associated allergy, especially of the mucosa, (2) chronic bronchitis which is so frequently secondary to an upper respiratory infection where again there are two factors interfering with normal ciliary activity, (3) inhalation of tobacco smoke usually producing deeper inspiration than normal respiration, and (4) any cardiac condition producing generalized stasis, especially in the mucosal areas, which may also inhibit ciliary activity by producing edema and congestion of the mucosa.

There are many instances of extensive x-ray evidence of silicosis in which there is very little disability. Since occasionally marked disability presumably due to silicosis is observed in individuals who have very little x-ray evidence of the disease, it would seem wiser to use a classification other than numerical progression except in those cases where there is definite evidence of active infection complicating the silicosis. So-called second stage silicosis should not be understood to be a progressive development which will eventually become so-called third stage. There are many occasions when silicotic lesions do progress if harmful exposures to silica dust are continued or some other factor such as a super-imposed or a simultaneous infection becomes operative, while in other instances the lesion may remain unchanged for years and some of the lesions actually may get smaller. We have also seen nodular fibrosis in relatively young men remain stationary for years.

The lung changes of simple silicosis may be briefly and simply listed as (1) bronchial tree and vascular hilus markings showing some increase of prominence, but these linear increases of prominence are always subject to error and may be due to many other conditions; (2) the lung changes described as nodulation. Nodulation, however, may be subject to a great deal of variation. Nodules may be either (1) hard, dense, and of granular-like appearance, (2) discrete and small, or (3) soft, fuzzy, and less distinct. They are distributed throughout the lung and have little or no tendency to involve the apex and the zone immediately above the level of the diaphragm. The finding of conglomerate shadows in the upper lobes which on postmortem have shown no evidence of tu-

berculosis has always been difficult to understand and explain. Any asymmetry of massive or conglomerate shadows is believed to be due to acceleration of the silicotic fibrosis formation during the period of an acute infection. Cardiac changes are not at all definite and probably nonexistent by reason of pulmonary fibrosis.

Changes noted in silicosis with infection are (1) pleural thickening and pleural adhesions and (2) pulmonary changes characterized by parenchymal infiltration in addition to nodulation. Mottling is a term which was reserved by Pancoast for the differentiation between infection fibrosis and dust changes. Emphysema, especially at the level of the diaphragm, is believed to be a common finding, although in most instances of so-called emphysema I believe that there is a relative hyper-aeration rather than true emphysema. It has been admitted by most workers that the presence of active tuberculosis definitely enhances development of silicosis.

If one should take the experimental work of Barclay and of Denny, Irwin, and their associates together with the observed facts in regard to the occurrence and development of silicosis throughout industry and attempt to correlate all the findings on the basis of pulmonary moisture content being a dominant factor in retarding ciliary action or inhibiting the normal protective mechanisms of the lung and in the formation of silica gel, I believe that we approach a more rational explanation of why silicosis develops only in certain individuals and why it may develop to a certain degree and then remain stationary in so many other individuals without further progress. It is probable that all workmen with acute infections and chronic passive congestion should be limited or restricted in the extent of their exposure to silica dust. In many of the allergies which produce edema and congestion of the bronchial and bronchiolar mucosa, the question should be considered as to whether these individuals should be eliminated from dusty occupations. We do not have time today to go into the subject of aluminum prevention and therapy of silicosis, but if the moisture theory which seems to offer a reasonable explanation for many of the variations of silicosis is sound, then the chemical basis of silicosis is reasonable and aluminum therapy to produce dryness would seem to have some basis.

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DISCUSSION

Dr. T. G. Clement, Peoria: I think Dr. Davis gave a very good presentation of silicosis. All of my experience with silicosis has been in the northern and central parts of the United States where they mine copper and iron. I think all his statements are absolutely correct.

I believe there is an explanation as to why the nodule does not increase in size. The paper which I read on silicosis before the Radiological Society of North America three or four years ago pointed out the fact that in studying these films of men who are perfectly well and who have been drilling rock for years underground, the nodules usually never exceed 6 mm. in diameter. I believe that is the maximum size to which they may develop because, when they get to about that size, then the lymph channels are entirely shut off and there is no way to feed that nodule any longer and consequently there is no way for the silicotic dust to get to it.

Also, around these nodules, if you will notice in the microscope, there is usually a dense limiting membrane of fibrosis which prevents their enlargement.

A man went to a mental specialist.

"What seems to be the trouble?" asked the doctor.

The patient responded by vigorously brushing imaginary things off his arm, explaining: "See? I have scorpions on my sleeve!"

The specialist, backing away, screamed: "Well, you don't have to brush them off on me!"

Tattler & Bystander.

RADIATION THERAPY IN CHRONIC LEUKEMIA

T. G. Clement, M.D., F.A.C.R.
PEORIA

One of the greatest hazards to the progress of civilization and science today is our acceptance of our status quo as final. Any disease which is always described as "incurable" should be a perpetual challenge to our resourcefulness and merit our constant consideration. These are and can be the only reasons for presenting a paper on the treatment of chronic leukemia at this time. It will be a plea for more careful consideration in diagnosis and for continuation of carefully supervised conservative treatment.

Within the last few years there has been an attempt to rename or reclassify the types of the disease. It is easy to admit that the earlier designation of the various types was a little awkward, but a more recent classification by cell types rather than clinical manifestations seems to be more rational.

Acute leukemia, which is characterized by a preponderance of immature leucocytes and runs a very short course, is of sudden onset. The onset may be with gingivitis, sore throat, fever, pallor due to anaemia, anorexia, purpura, joint pains or lymphadenopathy. Any one of these symptoms or all of them may occur at the onset. Splenomegaly is present in 60 to 70% of the patients, especially in those with acute lymphoblastic leukemia. Half of these patients have an enlargement of the liver. Some of them have involvement of the skin, the so-called leukemia cutis. In fact, leukemia cutis may be the first manifestation.

The total leucocyte count may not be higher than 100,000. It has been known to be as low as 400. There is a reduction in the blood platelets, the white cells are preponderantly immature. The few mature cells seen are polymorphoneuclears and myelocytes of the neutrophilic variety with no eosinophiles or basophiles. The anemia is sever and progressive. In acute lymphoblastic leukemia, the lymphoblasts may number as high as 90%.

The duration of acute leukemia may be as short as two weeks, or as long as several months.

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The treatment is certainly not radiation therapy.

Aleukemic leukemia, some times called pseudo leukemia or leucopenic leukemia or subleukemic leukemia, should, as far as therapy by radiation is concerned, be classified with the acute leukemias. In fact it is a more or less prolonged form of acute leukemia and rarely has the typical manifestations of chronic leukemia.

CHRONIC LEUKEMIA

Chronic leukemia, which is characterized by an increase in the number of leucocytes in the blood, the majority of which are the mature forms, is of slow onset. In many instances its onset may be said to be insidious and often it is discovered in the course of routine examination. The presenting symptoms may be anemia, anorexia, loss of weight, flatulence, hematuria, gingivitis, pain in the back, enlargement of the liver or of the spleen. The constant findings are loss of weight, anemia, lymphatic gland enlargement, and enlargement of the spleen. The liver is usually palpable but jaundice and ascites are rare. Very often anoxemia is present. Cardiac enlargement with murmur and pulmonary congestion have been noted. Purpura, leukemia cutis, skin lesions of rounded discolored masses and herpes zoster have occurred. The skeletal and nervous systems have been attacked.

For consideration of treatment with rays of short wave length only two types of chronic leukemia will be discussed; the myeloid and lymphoid types.

CHRONIC MYELOID LEUKEMIA

Chronic myeloid leukemia is said to occur more frequently in males, in the proportion of about 60 males to 40 females. It is said also to occur more frequently in the earlier years of middle life as contrasted with lymphoid leukemia which occurs in the later years of middle life. The male patient presents himself complaining of various symptoms but most often of a heavy sensation in the left upper quadrant of the abdomen, pallor, weakness, loss of weight and gastric disturbance. The female patient presents the same symptoms plus some disturbance of menstruation.[2] As the disease progresses bleeding of the gums, palpitation, dizziness and shortness of breath may appear. At times the appetite is excessive although the patient continues to lose weight. Hot flashes, in both men and women, with hyperhydrosis occur. Later on the liver

enlarges slightly and the spleen is definitely palpable. Lymphadenopathy may or may not occur. When present, the glands are usually soft and the enlargement is not marked. Pain over the sternum has been noted in the majority of cases. Low fever is sometimes present. The basal metabolic and the sedimentation rates are increased. Remissions occur and the patient may, from time to time, for varying periods show improvement in all manifestations of the disease and feel quite comfortable. Later the symptoms return and may or may not be increased.

The blood picture of chronic myeloid leukemia is not constant or typical, but is usually about as follows. The total white count varies from 100,000 to 800,000 cells. The cell distribution is segmented neutrophyles 30 to 70%, metamyelocytes and myelocytes 30 to 50% and myeloblasts 2 to 10%. There may be, early in the disease, a moderate number of immature cells. The majority of the myelocytes are neutrophilic, except in the rare cases of eosinophilic leukemia in which the eosinophiles make up about 90% of the cells and in basophilic leukemia where the basophiles number about 60%. Lymphocytes are decreased in percentage but increased in actual number. The anemia is usually hypochromic in type. Other abnormalities, such as nucleated red cells, polychromatophilia, and basophilic stippling, are usually present.

The prognosis is poor and all authors state that the condition is invariably fatal. The duration of life is from three to fifteen years. Intercurrent disease often produces death.

The diagnosis should be made by a competent hemotologist and the correctness of the diagnosis should be his responsibility. But the radiologist should be sufficiently schooled in the recognition of the different types of cells and their significance to intelligently discuss the variations of the disease with the hemotologist.

At autopsy the bone marrow and the spleen reveal the more characteristic findings. The spleen is enlarged although little change in shape may be encountered. The cut surface is smooth and gray. The capsule may be adherent. Under the microscope, cells similar in character to those found in the peripheral blood stream seem to infiltrate the entire tissue so that its normal structure is partially obliterated giving it the appearance of bone marrow. Here and there may be evidences of infarction. It is possible that the spleen is only a filter but there is some evidence to suggest that it has partially resumed its original blood forming function.

The bone marrow is changed in appearance from that of a yellowish fat color to gray, red or brown. Microscopically cells of the granular series predominate; neutrophiles, eosinophiles, basophiles and melocytes. Occasionally myeloblasts are seen. The erythroblastic tissue is largely replaced by leucoblastic tissue.

The liver is somewhat enlarged but its shape rarely undergoes any change. Infiltration of the capillaries is present and they are distended with cells of the type found in the spleen, bone-marrow and the circulating blood. The lymph nodes may show no change, or they may show infiltration with myeloid cells. In fact, infiltration of any organ of the body may occur and it is this infiltration of the tissues that leads to hemorrhages of all varieties, even hemorrhage of the brain.

CHRONIC LYMPHOID LEUKEMIA

Chronic lymphoid leukemia is said to occur most frequently in the later years of middle life and to attack the sexes in the proportion of about 75 males to 25 females. Its onset may be more insidious than that of chronic myeloid leukemia. Oftentimes the disease has been present for months before the patient consults the physician on account of enlarged painless lymph nodes, pallor, weakness, dyspnea, loss of weight, vertigo or hemorrhages. Oftentimes the lymphadenopathy may be present for many months and the patients general health be considered good. It has been said also that the lymphadenopathy of lymphoid leukemia is more marked than in myeloid leukemia, while the enlargement of the spleen is greater in the latter type of the disease. Leukemia cutis may be the only manifestation or other skin abnormalities such as bronzing, urticaria, pruritis, nodules and pustules may be present. In chronic lymphoid leukemia as in chonic myeloid leukemia, the basal metabolic rate and the blood sedimentation rate are increased. On the whole, lymphoid leukemia seems to run a much milder course than myeloid leukemia. But the statements made concerning remissions and exaccerbations of chronic myeloid leukemia hold good for chronic lymphoid leukemia. However, in the later stages of chronic

lymphoid leukemia the exaccerbations are more often of the acute type and the decline of the patient more rapid.

The blood changes in chronic lymphoid leukemia are quite typical, although variations from the classical findings occur frequently. The total white count is not as high as in chronic myeloid leukemia. It is variously stated as ranging between 100,000 and 250,000 with the average of a large number of patients being 150,000 cells on admission. The stained smear gives the so-called "monotonous" type of picture because 90% to 99% of the cells are small lymphocytes. When anemia is present it is of the hypochromic type, although during remissions the red cell count and the hemoglobin may be near normal. Anisocytosis and poikilocytosis and a few nucleated red cells are present, depending upon the degree of anemia.

What has been said about the prognosis of myeloid leukemia applies to lymphoid leukemia.

The typical case of chronic lymphoid leukemia is easily diagnosed. In the younger patients, especially those that present a moderate leucocytosis, infectious mononucleosis must be considered. Pertussis, aplastic anemia and acute leukemia must be seriously considered. As a rule, the cough, little or no lymphadenopathy and the age of the patient should aid in the diagnosis of pertussis. In aplastic anemia the differentiation from aleukemic lymphoid leukemia is not marked and careful observation with repeated hematological studies should be made. Bone marrow biopsy should help markedly in the differential diagnosis. In case of doubt, treatment by rays of short wave length should not be given.

In chronic lymphoid leukemia the changes found at autopsy occur in the lymph tissue as well as in the bone-marrow and spleen. In all the organs the infiltration is with lymphocytes instead of cells of the granular series. Infarcts are less common. There is less change in the bone-marrow since in many areas normal leukogenic centers are present. Later the entire bone-marrow may be invaded by lymphoid cells. The spleen is moderately enlarged. It presents marked hyperplasia of lymph follicles. It is infiltrated with lymphocytes. The lymph nodes are all enlarged. The normal lymph gland structure is replaced by lymphocytes and the microscopic picture resembles lymphosarcoma.

Many pathologists state that lymphatic leukemia resembles lymphosarcoma and that myelogenous leukemia resembles multiple myeloma. The impression that lymphosarcoma and myeloma are neoplasms leads them to place leukemia in the same classification, that of the neoplastic diseases.

In the order of their sensitivity to the action of rays of short wave length lymphoid cells come first. Next come polymorphonuclear leucocytes or bone-marrow cells. There are no intervening types and these two come first. All other types of cells and tissues are more resistive. This explains the response of these two diseases to short wave radiation.

Treatment — In the treatment of chronic leukemia with rays of short wave length there are several things to be considered. Most important of these is the general physical condition of the patient. At his first visit, the patient with myeloid leukemia is probably complaining of weakness, loss of weight and a heavy sensation in the left upper abdomen or perhaps some gastric disturbance. The laboratory examinations disclose a moderate anemia and a marked leucocytosis. The patient's discomfort should merit our first consideration, not the laboratory findings of which the patient is unaware. What is our plan of attack? From any point of view it is better to relieve the distress in the upper abdomen, which is undoubtedly caused by the enlargement of the spleen. If we slowly and carefully attack the left upper quadrant by means of radiation of short wave length, we will slowly, it is true, but surely relieve the patient's symptoms without the possibility of precipitously making him more uncomfortable. The initial dose of roentgen therapy should be small enough to obviate absolutely the possibility of producing roentgen sickness or of too markedly reducing the white count. If this precaution is not followed the patient is immediately changed from one who is moderately comfortable to one who is definitely ill. He will immediately dread all subsequent treatments which he knows he must receive, and he is suddenly caused to believe that he is more seriously ill than he at first supposed. He is led to feel that this reaction is the natural result of all roentgen therapy and a pernicious mental attitude is at once established. The dis-

ease is insidious in onset and slow in development. Why, then be catastrophic in its treatment?

What should be the upper limit of the initial treatment? Certainly not more than 100 r at medium voltage and over one area only. In the majority of cases 75 r is sufficient. What should be the interval between this first treatment and the second. Certainly one week and possibly ten days. By proceeding cautiously we are able to observe the result of each treatment and space more accurately the interval between treatments and gauge more definitely the intensity of succeeding treatments. If the presenting leucocyte count was 600,000 cells and the first treatment reduced the count to 450,000 cells, the susceptibility of the disease in that particular patient is established and the therapy may be administered at longer intervals of time. If the reduction is only to 550,000 cells the susceptibility is not as marked and treatment may be given oftener. We plan to have this patient live and be treated for ten or fifteen years so it seems unwise to administer a "close-to-tolerance" dose in thirty days or less. The patient should be seen once a week during the first months of treatment and a careful evaluation of his symptoms and a complete blood count be made at each visit. If we have not created a treatment hazard in the patient at his first visit he displays definite improvement at his second visit.

The second treatment may be directed over the marrow of one of the long bones, or, if the patient has sternal pain, over that bone, or the spleen may be again treated. After three or four visits an extremely accurate estimate of the patient's susceptibility and response to short wave therapy may be made and a proper plan of action established.

In chronic lymphoid leukemia the most distressing symptom is the lymphadenopathy. Certainly these lymphatic gland enlargements, which may produce physical distress or may be displeasing to the patient from a cosmetic standpoint, should be treated first. Conservatism should again be used and the first treatment be small, possibly never more than 100 r and preferably 75 r. One area only, as was suggested for myeloid leukemia is sufficient at the first visit. Distant untreated areas tend to improve and all the glandular enlargements need not be treated. The same weekly visit should be required of the patient and an examination of the blood should be done as in the treatment of myeloid leukemia. It is certainly not necessary to treat the patient just because he is there, close at hand. Personal restraint on the part of the roentgenologist must be exercised and he must not feel that he is neglecting an opportunity. While due consideration should be given to the magnitude of the white cell count, it is well to remember that the patient with chronic leukemia carries a high leucocytosis with much more comfort than he does a low count. In myeloid leukemia a leucocyte count of 100,000 is not incompatable with good health and long life. In lymphoid leukemia 60,000 to 75,000 leucocytes are not too many. An attempt to reduce the total number of leucocytes too rapidly to too low a level may precipitate a chronic condition into an acute leukemia, or so markedly weaken the patient that he and the purpose of the treatment are both defeated. Slow, careful, well considered therapy in each case should be the studied attitude of the roentgenologist.

It is perfectly true that oftentimes the referring physician, the patient, or the patient's family may become discouraged because the process of therapy seems too slow. They want a quick cure. A rapid reduction in the number of the leucocytes may be obtained but the reaction is severe and the recurrance prompt. A careful explanation to the patient or his family and a little positive conversation with the referring physician will usually result in profitable cooperation.

This plea for a minimum of short wave radiation in the treatment of chronic leukemia is made as a gentle reminder only. All too frequently, as the months pass by, we gradually increase the intensity of the treatment and shorten the interval between treatments, hardly realizing that a transition in our method has taken place. It always pays to review some of our former work and compare our recent results. It is earnestly urged that more careful consideration be given each patient in endeavoring to see how little radiation may be employed in the treatment of chronic leukemia, rather than in trying to determine how much radiation the patient may tolerate. Certainly the old rule that "if a little is good, more is better" is not ap-

plicable in the treatment of chronic leukemia.
1007 Lehmann Bldg.

DISCUSSION

Dr. Harold Swanberg, Quincy: I don't know whether I misunderstood Dr. Clement or not, but he spoke about these patients living from ten to fifteen years. That, of course, is a long time for a leukemic patient to live. I appreciate that he said he did not have any statistical studies available, but could he give us some idea how many patients live ten or fifteen years under this method of treatment? I would like also to know if he has varied the wave length, or the kilo voltage of his radiation technique during the course of the treatments.

Dr. Harry Olin, Chicago: I would like to ask Dr. Clement a question. Some years ago there was an article in the Journal of Experimental Medicine on withdrawing from a leukemic patient about 200 to 200 c. c. of blood, mixing it with potassium citrate, irradiating the blood in a sterile beaker, and then re-injecting it into the patient and producing the same amelioration of symptoms and also the reduction in the white count as if the patient were treated externally. I would like to ask Dr. Clement if he finds any difference, according to the treatment. I try to keep the treatments far apart, being guided by the white count and occasionally by the basal metabolic rate.

Dr. T. J. Lang, Rockford: I would like to ask Dr. Uhlman if his observations on the BMR pertain to both types of leukemia, lymphatic and myelogenic.

I should like also to ask in what percentage of patients with leukemia, the BMR can be relied upon in guiding the therapeutic efforts.

Dr. T. G. Clement, Peoria (closing): In reply to Dr. Swanberg, if my memory serves me right, in the city of Duluth over a period of seventeen years we had twelve patients live twelve years and we had five patients live almost fifteen years. In the statement which I made in my paper, I probably was optimistic when I said we expect this patient to live twelve or fifteen years. I put that in to show that we should plan our attack on these principles, that the patient is not going to die right away, that we are going to have to treat him for a long time and therefore there is no reason for over-treating him in the first two or three months that he comes to see us.

You ask about the change of setting. I am perfectly frank in saying that we never change it. I originally started using 135 Peak kilovolts and 6 mm. of aluminum filter as recommended by Dr. des Jardins of the Mayo Clinic years ago, and I am still using that setting.

I want to thank Dr. Uhlman for bringing up the point about the basal metabolic rate. I have only been out of the Navy a few months, and it was not before us for our consideration before I went into the Navy. We are just beginning to use it now so I did not make any mention of it from a personal experience standpoint.

THE EFFECTS OF DRUGS ON THE ELECTROCARDIOGRAM

T. R. VAN DELLEN, M.D. and
J. R. MILLER, M.D.
CHICAGO

The literature contains much evidence that numerous physical and chemical agents can effect the cardiac conduction system. Striking examples have been reported where these have been used on experimental animals. Fortunately, but a few of these agents produce significant changes in man when used in therapeutic doses.

Alterations in the conduction mechanism are most readily demonstrated by the electrocardiogram. For their proper interpretation it is important that one be able to recognize changes which result from factors other than organic heart disease. This is true in the proper evaluation of borderline or serial electrocardiograms, particularly when the patient is receiving medication.

Reactions are known to occur following the administration of various substances even though they be given according to accepted methods. A reasonable explanation for these unfortunate events is frequently lacking. Necropsy may be of no aid. The usual explanations are "bad hearts," "idiosyncrasies," "general debility," etc. Investigators, who have used the electrocardiogram to study the effect of various drugs on the heart of laboratory animals have noted severe forms of irregularities sufficient to cause death without post mortem evidence of pathology in the heart. This is particularly true when high blood concentrations are obtained. It is, therefore, reasonable to suspect that similar conditions may cause death or non-fatal reactions in certain human beings.

In this paper we propose to review the action of various drugs on the electrocardiogram. Due to a lack of uniformity in the administration of substances studied and varying periods when records were made, there is considerable controversy regarding certain abnormalities.

Calcium, when administered intravenously to animals, produces[1,2] definite electrocardiographic changes. These consist mainly of bradycardia,

From the Florsheim Heart Clinic, Department of Medicine, Northwestern University Medical School.

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elevation of the T-wave and prolongation of the P-R interval. Atropine is capable of abolishing these abnormalities, and consequently they can be considered of vagal origin. Various degrees of A-V block are not uncommon. As the concentration of calcium in the blood increases, signs of ventricular irritability are evidenced by the occurrence of premature contractions or ventricular fibrillation. Death results from cardiac arrest either with or without a preceding ventricular fibrillation. When 10 cc. of a 20% solution of calcium gluconate is administered intravenously to normal individuals,[3] a flattening or inversion of the P and T-waves is frequently noted associated with the usual bradycardia.

Potassium[4,5,6] is also capable of producing rather marked changes in the electrocardiogram. These consist initially of an elevation of the T-wave followed by a lowering of the ST segment. The P-wave becomes widened and ultimately disappears. An intraventricular block is not uncommon, which progresses into a complete disorganization of the QRS complex. As the blood concentration increases, complete heart block, ectopic impulses, ventricular standstill and ventricular fibrillation are noted. The latter defects are usually seen with high blood concentrations but small amounts of potassium are also capable of producing these changes.

Magnesium is capable of depressing all parts of the conduction system[7,8] when administered to laboratory animals. The heart rate at first increases, then decreases. A typical prolongation in the P-R interval is noted leading to various degrees of A-V block. A widening of the QRS complex is not unusual. Extra systoles and ventricular fibrillation have been reported. The T-wave and ST segment are not characteristically changed but inversion of the former complex may occur. With larger doses cardiac arrest ensues, preceded always by respiratory paralysis. When therapeutic doses of this drug are administered intravenously to animals or man, minor changes have been noted.

The effect of digitalis on the conduction system is well established.[9] It consists mainly of bradycardia, followed by flattening and inversion of the T-waves. The ST segment is usually lowered with a tendency toward flattening. Changes in the A-V conduction time appear later, with an increase in the P-R interval. More toxic doses cause ectopic impulses, auriculoventricular dissociation and ventricular fibrillation.

Barbiturates have little influence on the conduction system of the heart. Of significance is their ability to abolish existing arrhythmias and they may prevent the occurrence of abnormalities usually produced by certain drugs, notably, calcium and digitalis.[10,11]

It is well known that nicotine will alter cardiac activity. In dogs and rabbits, toxic doses may produce nodal rhythm, auricular flutter and heart block.[12] Increase in the amplitude of the T-waves and decrease in the amplitude of the R-waves have also been reported.[13] When tobacco smoke is inhaled, extra systoles may develop and in a recent study[14] the T-waves were lowered or inverted in 15 out of 45 patients following the smoking of one cigarette. On the other hand, the ingestion of four ounces of whiskey produces no significant change on the electrocardiogram.[15]

Hartwell, Burrett, Graybeil, and White[16] recently reported their observations on the effect of four commonly used drugs on the T-wave. This wave was lowered after the subcutaneous injection of 1:1000 adrenalin hydrochloride, 1/50 grain of atropine or 15 to 25 mgm. of mecholyl. Five-tenths to 1 mgm. of ergotamine elevated the T-wave. These studies were performed on healthy human beings. The observations on mecholyl confirms the earlier investigations of Page.[17] According to Halsey,[18] atropine will not only increase the heart rate, but it will also alter the P-waves. The A-V conduction time is slowed with small doses and quickened with larger doses. Atrioventricular rhythm has also been reported.[19] Adrenalin may evoke premature contractions, increase the P-R interval and cause other arrhythmias.[20]

Mercurial diuretics are capable of producing marked electrocariographic changes in dogs when administered intravenously.[21] There is a depression of the T-waves, runs of extrasystolies, ventricular tachycardia, ventricular fibrillation and death.

Dilantin (phenytoin sodium) currently used in epilepsy also has an effect on the cardiac conduction system. In experimental animals,[22] the

first evidence of involvement of the heart is a prolongation of the A-V conduction time, associated with a widening and increased amplitude of the P-wave. This is followed by a depression of the ST segment, elevation in the height of the T-waves, bradycardia and finally an ectopic rhythm of ventricular origin. Clinically, Mallach, et al,[23] were able to demonstrate electrocardiographic changes in 25 out of 27 patients receiving therapeutic doses of this drug. These changes consisted of a prolongation of the P-R interval and a lowering of the T-wave.

The sodium salts of sulfapyridine, sulfadiazene or sulfathiazole have little effect on the conduction system. An increase in heart rate, with a corresponding decrease in the P-R interval and premature contractions have been reported.[24] Dozzi[25] cited one case of nodal rhythm and myocardial damage in man following the use of sulfanilamide.

COMMENT

An attempt has been made to describe the effect of various drugs on the cardiac conduction system of laboratory animals and man. The list of drugs is far from complete. We have presented evidence to show that factors other than organic heart disease may influence the electrocardiogram. This is important for the proper evaluation of borderline or serial electrocardiograms, especially when drugs are being administered.

The possibility that the cardiac conduction system may be responsible for reactions or even fatalities following drug administration is also of importance. These abnormalities are in most instances demonstrated only with the electrocardiogram. These changes depend on blood concentrations, which in turn depend on the rate of injection, the amount administered, and, to a lesser degree, the rate of excretion.

It is not the purpose of this paper to discourage the administration of drugs in general as those in current use have no serious effect when administered correctly.

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DISCUSSION

Dr. J. Roscoe Miller: I have little to offer except what Dr. Van Dellen has already reported. Our attention was called to the importance of this subject on a number of occasions a few years ago where a mistaken diagnosis was made early because we did not recognize the fact that certain drugs had been administered and that therefore the electrocardiogram had been altered. In each case shown there was a significant alteration — so much so that a diagnosis of organic heart disease of some nature could easily have been made had we not been cognizant of the fact that drugs could produce the changes.

THE ACUTE ABDOMEN

ANDY HALL, M.D. AND A. W. MODERT, M.D.
MT. VERNON

The definition of an acute abdomen is "Any acute condition within the abdomen demanding immediate operation."

In discussing the subject, we at once note that we are confronted with a vast variety of rapidly progressing pathological conditions which require prompt, accurate diagnosis and speedy attempts to aid in the repair or correction of the attacking condition. It may be traumatic as gunshot wounds, external blows to the abdomen resulting in injuries to the abdominal viscera which may cause intestinal perforations, hepatic, splenic, mesenteric, or injuries to other organs which may or may not be accompanied with hemorrhage. Again, we must deal with the many diseases which may attack any organ or structure within the abdominal cavity.

The importance of this subject is emphasized by the large number of deaths that occur annually in this State as a result of acute abdominal lesions, which do at some time develop symptoms of acute abdomen. Just how many of these deaths could have been prevented by prompt diagnosis and timely operation we can only conjecture. But we have every reason to believe that the number of deaths could be materially reduced.

The responsibility of this large mortality does not lie wholly upon the shoulders of the surgeon who operates these cases. It is true that some surgeons lack skill, experience and judgement. But the operations for intra-abdominal lesions are fairly well standardized. In most every community you can find a well equipped hospital and surgeons sufficiently skilled to meet the demands in most of these cases.

It is my observation that many of these deaths occur as a result of failure to make a prompt diagnosis or failure to advice and secure an early operation after a diagnosis has been made. The man responsible for making the diagnosis and giving or advising prompt surgical treatment is the family physician who is first called to see these patients. Too often internal medication is given to meet the symptoms without giving due study and consideration of the possible lesions that might be responsible for causing the symptoms present.

The first and most important function of every physician when called to see a patient is to make a diagnosis — find out what is the matter with the patient. Unless this is done he will be unable to outline and give proper treatment, he will lose valuable time, prolong the convalescence, and may even sacrifice the life of his patient. Once a diagnosis is made of an "acute abdomen" there should be no question or hesitation concerning the course of treatment.

If a doctor is uncertain about the diagnosis or treatment in a patient who seems seriously sick, he should never hesitate to call in counsel. It will relieve him of shouldering all the responsibility and will often result in saving the life of his patient and his own reputation.

In a patient suffering from an acute or prolonged abdominal pain or other symptoms indicating serious intra abdominal trouble, the physician should bear in mind the lesions that might be responsible for these symptoms. He should take into consideration the history, subjective symptoms, physical findings, and if necessary the laboratory and x-ray findings if they seem indicated. If all these fail and the case is urgent, the attending physician should not hesitate to advise an exploratory laparotomy. Sometimes this is the only means whereby we can make a differential diagnosis and by appropriate treatment give relief to the patient.

I have secured from the Department of Public Health the mortality statistics covering 1932

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and 1942. This indicates that in 1932 no less than 3,243 lives were lost from diseases that before death produced symptoms or manifested themselves by what we know as an "acute abdomen". In 1942 — ten years later — the same diseases resulted in 2,780 deaths. These statistics are as follows:

	1932	1942
Appendicitis	1,169	538
Intestinal Obstruction	516	486
Ulcer Stomach	401	411
Biliary Calculi	363	284
Hernia	309	307
Non-malignant Tumors of Uterus	151	109
Ulcer of Duodenum	124	172
Non-malignant Tumors of Ovaries, Tubes and Parametrium	154	109
Ectopic Gestation	56	25
Total	3,243	2,780

To the above list we might add perforations of the intestines as a result of typhoid or dysentery. Also one should bear in mind the numerous injuries to the abdominal viscera as a result of traumatism causing an acute abdomen.

Perhaps no subject has been more freely discussed throughout medical journals and in our medical meetings during the past forty years than has appendicitis. Yet, in 1932, 1,169 deaths occurred in Illinois from this disease. In 1942 there was a marked drop to 538 deaths which is no doubt due to a more enlightened and alert public, better trained family physicians, better hospital facilities and more experienced surgeons. Yet with 538 deaths from appendicitis in 1942 there is need for more prompt diagnosis and immediate surgery.

What are the important factors involved in producing fatal results in appendicitis? In my opinion there are three: the indiscriminate administration of purgatives, delayed diagnosis and late operations. Dr. John O. Bower, surgeon, Philadelphia General Hospital, made a study of 8,216 cases of appendicitis occurring in that city during 1928, 1929 and 1930. Only cases admitted to the hospitals were considered.

The records showed that 3,095 cases of appendicitis were admitted to 28 Philadelphia hospitals during the year 1930. Of this number 149 died. Of the 402 patients who had been given no purgatives or laxatives only 5 died — this is 1 death out of 80 patients. Of 889 who received one laxative 62 died, or 1 in 14. Of 103 cases that had been given two or more doses of laxatives 15 died, or 1 out of 7.

Ofttimes a purgative has been administered by the family or friends before a physician is called. But far too often for the good of the patient, if a purgative has not been administered that is usually the first thing the physician does when he is called.

Administering a purgative to a suspected case of appendicitis is about the most dangerous and vicious thing that can be done. An enema is more effective, acts quicker and does less harm.

Some years ago Dr. John B. Murphy said that the time to operate a case of appendicitis was as soon as the diagnosis is made. This rule should invariably be followed; especially if the diagnosis has been made within the first 48 hours.

Time will not permit me to go into a lengthy detailed discussion of all the causes of an acute abdomen. However, prompt diagnosis and surgical treatment will save many lives and decrease the chronic defective individuals who must fight the remainder of their lives as best they can and be dependent on their relatives or friends to gain a meager existence.

Peptic ulcers are very common lesions and perforation of gastric and duodenal ulcers is not an unusual complication and should always be considered possibly in any sudden acute abdominal pain. Of 1,871 cases collected by Musser, perforation occurred in 28.1%. Of 272 duodenal ulcers in Mayo series, perforation occurred 60 times or upwards of 22%. The history, subjective and objective symptoms of a perforating peptic ulcer are quite positive. A delay of only a few hours in diagnosis and operation is often too late. If operated within the first six hours most will recover, after twelve hours but few will survive.

Prompt diagnosis and surgical treatment would save many who died from intestinal obstructions. This is especially true of infants and children where the obstruction is due to an intussusception or telescoped bowel. If diagnosis and operation is delayed until it is necessary to make a resection practically all of these young patients die. Three hundred and seven

died as a result of hernia in this State in 1942. Why should anyone die from hernia? Most of those who die from hernia could be saved by prompt diagnosis and proper treatment.

Of the 284 who died as a result of biliary calculi in 1942, it is safe to say that most of these were of long standing, that they had stones in the common duct, that they were jaundiced, had become infected or were in bad physical condition at the time of the operation. Early diagnosis and operative treatment would have most of them. Prolonged internal medication month after month and year after year is simply palliative, cures none of these cases, and is ofttimes continued until serious complications have arisen that greatly lessen the patient's chances of recovery even though he be operated by the most skillful surgeons in the country.

It goes without saying that non malignant tumors of the uterus, cysts of the ovary and ectopic gestations are most easily diagnosed.

Ectopic gestation, once considered quite rare, is not an uncommon complication in pregnancy. A rupture usually occurs within the fifth to eighth week. If a physician is called to a patient of childbearing age, suffering from an acute, severe abdominal pain lowdown in the pelvis and accompanied by shock, he should always bear in mind the possibility of an ectopic pregnancy. Prompt diagnosis and treatment will save practically all of these patients.

Infections of the tubes, ovaries, and parametrium can usually be diagnosed early by the history, subjective symptoms and physical findings. Vaginal drainage, or laparatomy in suitable cases, will relieve most of these patients.

The death of 538 cases of appendicitis annually in Illinois, 285 from biliary calculi, 307 from hernia, 109 from non malignant tumors of the uterus and upwards of 2,780 from various intra abdominal lesions not of malignant character is a challenge to the medical profession of this State.

In summing up the acute abdomen:

1. It is a big T.N.T. mined field and look out for the squibb may blow out your patient's light while you are looking for a match.
2. Remember that the patient's time to the operating room must be short if you are to win the battle of abdominal explosions.
3. Periodical public education will save many a life. The physician and surgeon must realize his responsibility.
4. Make a prompt diagnosis with necessary consultation and act accordingly.

Surgery has reached such a high state of efficiency and skill that not much more can be accomplished by the surgeons discussing these subjects among themselves. The greatest hope is in the discussion of these problems with the family physicians, the general practitioners, the men who are first called to see cases of this character, and last but not least a campaign of education to the layety. The physician should educate himself in the symptoms and diagnosis of an acute abdomen and instill into himself a consciousness of his responsibility in making an early diagnosis and advising early surgical treatment.

DISCUSSION

Dr. Everett P. Coleman, Canton — Mr. Chairman, members of the Section on Surgery, Doctors Hall and Modert have given a very excellent and very practical paper. The only thing I can hope in any discussion of it is to emphasize a few points that have already been brought out.

The term "acute abdomen" has been criticized grammatically but it carries the weight of medical usage and I am glad to hear it used.

It is true that some acute surgical pathology in the abdomen, most of it in fact, calls for immediate action. I do believe, though, that in some instances we should lay a little more stress on adequate preparation of the patient and upon diagnosis, not to the exclusion of immediate action because that is perhaps more important than any other thing, but also we should not neglect other points. We should get away from the all too common idea that immediate action means haste — that it means haste in diagnosis and haste in operation which tends to bring about the fact that a poorly prepared patient is subjected to an abdominal operation under rather difficult circumstances, difficult both for him and for the surgeon.

I would like to bring out three rather common conditions that come under this category. First, having gone through several years of treating acute appendicitis by operation whenever the diagnosis was made — and that in years gone by used to include the third, fourth and fifth day of the disease — we have changed our plans and when there is a spreading peritonitis we have turned toward conservative treatment. I think with the advent of the sulfa drugs the indications for going into the abdomen have been broadened because of the intra peritoneal use of sulfa drugs; but, on the other hand, a case of spreading peritonitis will frequently respond to intravenous sulfonamization and medical treatment of that condition in the abdomen during the phase of spreading peritonitis. As a matter of fact, once that condition has subsided

the removal of the diseased appendix carries little risk. During that time it carries a definite risk and keeps a mortality rate that has something to do with these figures that have been presented.

The second condition is that of acute intestinal obstruction. Unless diagnosis is made very early these patients come to the operating room — not necessarily to the hospital because sometimes they develop in the hospital, but they come to the operating room as very poor risks. They come in with an abdomen that is distended, they come in dehydrated, and surgically they are a decided problem once the abdomen is opened under these conditions, and, incidentally, they are very much poorer risks.

An immediate operation upon this type of patient carries an unnecessarily high mortality rate. That does not mean neglect or delay. It simply means that this type of patient can have anywhere from one to three hours spent in preparation — the passage of the Wangensteen tube, administration of intravenous fluids to overcome the dehydration, but particularly the relief of the distended abdomen so that, especially if the patient is vomiting, he is not going to vomit during the anesthetic, so if he is quite distended the closure of the abdomen will not be an almost impossible procedure. A short period of time — not delay, not neglect — will put him in a position whereby he is a much more favorable surgical risk. I think by paying some attention to this thought the mortality rate can be lowered.

The third condition is that of mesenteric lymphodenitis. Following acute respiratory conditions by a week or ten days, children and adolescents are quite prone to develop abdominal pain. Many times these are indistinguishable from attacks of acute appendicitis, and when the abdominal pain persists they should be subjected to immediate appendectomy when there is the least doubt. However, when the abdomen is opened and you find no evidence of inflammation in the appendix, further exploration will reveal the presence of mesenteric lymph nodes which have been responsible for the symptoms. The important thing here is that these patients always recover from the operation, they recover from their symptoms even though they may have had acute exacerbations of recurrent symptoms, and more important, a possible appendicitis has not been overlooked.

I want to thank Dr. Modert and Dr. Hall for the privilege of discussing their paper. I think it has been very helpful and very timely for this type of meeting.

Andy Hall, Mt. Vernon (closing): There is not much that I wish to add to the subject but I wish to call your attention to the great advances that have been made in abdominal surgery since I graduated from Northwestern University in 1890. At that time I had only seen two abdomens opened during my service in school and in the hospitals. The abdominal cavity was a forbidden field of operation at that time, but since then surgery has advanced to such a stage that thousands of lives are being saved now that otherwise would have been sacrificed.

There are just a few things that I want to emphasize in the diagnosis. All patients suffering acute abdominal pain, vomiting, examine them for hernia. Any number of times I have been called to see patients that have been treated for two or three days with vomiting only to discover that they had an incarcerated or strangulated hernia. Early diagnosis and early surgical treatment should save all hernia cases. The fact that so many people died here from hernia emphasizes the fact that an early diagnosis and early operation have not been made. The only excuse for a man dying from a henria operation is late diagnosis and a late operation.

Ectopic pregnancy, as the Doctor stated, is not an infrequent occurrence. Perhaps it occurs as often as do twin pregnancies, and an early diagnosis and an early operation will save possibly all extrauterine pregnancies.

CANCER OF THE LIP

D. B. Freeman, M.D., F.A.C.S.
MOLINE

In a brief discussion on cancer of the lip, attention should be called to the fact that all malignancies wherever located, have certain characteristics which are common, the tendency to destroy life, by invasion of surrounding tissue infiltrating deeper and deeper, later ulcerating thus causing hemorrhages often fatal and also the formation of metastases, primarily in the nearest group of lymph glands and later those adjacent and finally getting into the blood stream, becoming general, at which stage curative means are of no avail and all that remains to do is to alleviate. This is especially true of cancer of the lip. Apparent causes are precancerous lesions such as trauma, herpes, sunburn, heat burn, exposure to weather, smoking, degeneration of moles and warts, scaly patches, keratosis and leukoplacia. Carcinoma of the lip is usually or most often a squamous celled epithelioma, less frequent a basal celled epithelioma. The squamous celled bring more infiltrating, more penetrating and more subject to secondary glandular involvement and more resistant to radiation, consequently, harder to cure.

In cancer of the lip, the diagnosis should be fairly readily made, there are a few lesions from which it should be differentiated but those lesions

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as a rule can be ruled out by laboratory and biological test, the most common lesions and those assuming characteristics more nearly like cancer are syphilis and tuberculosis. Lesions such as herpes, leukoplacia, cysts, the acute eruptions should give very little difficulty in the diagnosis. In arriving at a diagnosis, we should condemn the promiscuous cutting out of sections of the lip to make diagnosis unless these sections are removed by cautery excision. I am more and more convinced that there is danger of dissemination of the lesion whenever malignant tissue is cut into and areas opened up into lymphatic and vascular vessels. If a doubt exists as to whether it is a cancer or not, it should be *so* considered until a correct diagnosis is made. Much care should be exercised in determining the extent of involvement — some cases show very little on skin surface but the process extends deep into the tissue — it would be easy in this type to do an inadequate operation. Lip cancers vary as to their malignancy — some being more malignant than others — the same type varies as to rapidity of growth and spread dependent on the resistance of the individual, thus two factors produce the same condition, low resistance to cancer and increased malignancy.

The statement can be made that cancer of the lip should be one of the most easily eradicated of all malignancies for several reasons: First, the location is such that it soon attracts attention, if not to the individual himself, to some member of the family so that the patient should present himself to his physician. There is, as a rule, a considerable time elapsed between the time of discovery and the stage when it becomes inoperable, at least, a period of weeks when the proper methods for cure could be instituted and the cancer eradicated.

Most lip cancers are located on the lower lip. The name Smokers or Pipe Cancer is a misnomen since many non smokers develop this disease and it is not uncommon to find this disease in women and it follows the same identical course there as in the male. However, the concensus of opinion is that smoking is a predisposing cause and does cause irritation and causes more rapid growth. There is very little doubt that smoking causes leukoplacia which later becomes cancer. It will be interesting to note in future statistics whether the increasing amount of smoking by women will influence the incidence of this disease or not. The rapidity of growth varies considerably, but lesion appears identical at same stage. The location of the cancer on lip determines the course, spread and gland areas involved. In center of lip, both sides of neck are involved but located at angle of mouth it most likely is one sided secondary involvement. A study of the anatomy and histology of this part of the body readily shows the course which the disease follows.

Granted that a diagnosis has been made what is the correct method of procedure to cure and by cure I mean at least a three years freedom from any signs or symptoms and we know that very few recur after that period has elapsed. The treatment depends entirely on the amount of involvement and that can only be judged by a careful examination and by the experience of the surgeon who assumes the responsibility of this treatment. Needless to say, there is no one set pattern in the treatment of cancer of the lip and am presenting this paper for your consideration, not that it is the only method but one which has been successfully employed many times.

There is one important point to stress in the treatment of this condition and that is that it should be radical enough to remove all involved tissue no matter how extensive, if any cell or part of the malignancy no matter how small is not destroyed, there is bound to be a recurrence and your treatment has been of no avail, not only just a waste of time and energy but what is more important that lesion has become irritated and then the tendency is to make it flare up and grow much more rapidly. At this point, I want to emphasize the importance of doing a thorough eradication the *first* time any treatment is instituted. Kill it as you would a rattlesnake. The responsibility of a cure, if the lesion is in a curable stage, rests when first presented for treatment, entirely on the physician who first undertakes to cure the individual afflicted. If only such measures are used which do not destroy this growth or ulceration, or as I have seen many times, he is advised to leave it alone and to wait and see what will develop that time is lost and the disease soon passes into the stage when it is incurable. That time is lost when it could have been easily cured.

Obviously, then from what has been discussed, the treatment cannot be identical in every case. There is only one *dictum,* that is; a thorough destruction or eradication of all cancerous tissue no matter at what stage. No one method is applicable in these cases but it is by a combination of surgery, cautery, and radiation that the best results are obtained.

If the lesion is an extremely early one — a simple V-shaped excision by scalpel well away from involved area will suffice or better still, V-shaped removal by cautery, lip repaired at once, or the area allowed to granulate and then repair deformity. When wound is allowed to granulate, it does so rapidly unless some cancerous tissue is left. Even in these very early cases it is of extreme importance to palpate the glands of this area to be sure that there is no glandular involvement. Radiate on *least* suspicion of gland involvement. Practically all cases are now radiated — radium preferred.

If the lesion involves a considerable part of the lip, infiltrating deep into the lip but no palpable glands the method of choice would be wide excision of the lip with thorough radiation of lip and submental region by radium and later a plastic operation to repair deformity of lip. Object is to destroy cancer first, regardless of deformity — later take care of the deformity.

With a large area of involvement and destruction of large part of lip and with glands involved the problem becomes more complicated — the usual procedure being destruction or dissection of entire lip and part of cheek by cautery dissection of glands of neck by cautery, if possible, or else by dissection and this followed by extension radiation, wound allowed to granulate. When the cancer has reached this stage there will be a marked deformity so that it may require several plastic operations to overcome the defects remaining after the treatment. When these drastic methods must be used one can readily see how it would be possible to fail to remove every bit of malignant tissue so that it is not surprising that a certain percent of these advanced cases have recurrences. But, the percentage of cures are high enough to warrant using these drastic measures.

When there is a bilateral involvement of the deep glands of the neck and chest, the case becomes practically incurable — radiation alone retards the progress and seems to give some relief — otherwise, the only thing that can be done is alleviation of pain. At the angle of mouth and with much destruction of cheek, the operation must be very wide and the deformity is more difficult to correct.

Whenever dissection by cautery can be done, it is better to use cautery even along vascular tracts.

In conclusion, I want to reiterate that the prognosis in these cases depends entirely on the time when treatment is instituted and the stage of the lesion — the earlier and the less advanced, the better the prognosis.

Many months ago the Army assigned a group of eminent psychiatrists to determine the manner in which to select soldiers for duty in various sectors of the fighting fronts. The Army wanted to know the best way of determining which soldiers, for instance, should be sent to Iceland, and which soldiers would be more effective in desert warfare . . . . The psychiatrists met with a Harvard group and a series of experiments were made. After many tests the learned professors made their report. . . . The best way of determining whether a soldier is more effective in the desert or in the north, they reported, was to ask each soldier: "What kind of weather do you like — warm or cold?"

—*Journal American Medical Association.*

Medically Described

A patient who complained of digestive troubles was told by a specialist that he was drinking too much and would have to knock off.

"Well," said the patient, "what am I to tell my wife?"

The doctor thought for a few minutes, then said: "Tell her you are suffering from syncopation. That will satisfy her."

The patient did as he was told. "What is syncopation?" asked his wife.

"I don't know," said the husband, "but that's what he said."

When her husband had gone out the wife looked up the word in the dictionary, and found that it meant: "Irregular movement from bar to bar."

Physical Medicine Abstracts

John S. Coulter, M.D.

BICIPITAL TENOSYNOVITIS

Robert K. Lippmann, M.D., New York City
In NEW YORK STATE JOURNAL OF MEDICINE, 44;90;2239
October 15, 1944

Periarthritis, now more generally known as frozen shoulder, was originally described by Duplay in 1898 and so was removed from the vague classification of arthritis. Duplay ascribed the pain and stiffness that characterize the condition to an adhesive inflammation of the subacromial bursa and recommended brisement force for its cure. This concept and therapeutic approach have persisted for almost fifty years in spite of meager pathologic support. Our surgical studies, as reported in the Archives of Surgery, have revealed subacromial bursa inflammation in only a few of these cases. Instead tenosynovitis of the long biceps tendon and sheath was consistently encountered. This present paper summarized these studies and their clinical application.

Symptoms: The typical case of periarthritis, or frozen shoulder, commences with a mild ache in the shoulder or arm, which grows inexorably worse and is accompanied by progressive stiffness. The pain grows in intensity, becoming almost insufferable, and the stiffness slowly increases to the point of almost complete scapulohumeral fixation. After months of growing distress (often increased by scalene spasm and pain down the arm), the pain starts to abate and shoulder motion begins to improve. Undulant progress continues until the shoulder is again clinically normal. During the period when the disease is progressing, the pain dominates the picture. In the period of improvement, stiffness is the most prominent complaint.

SUMMARY

The typical clinical aspects of periarthritis, or frozen shoulder, are reviewed, with emphasis on the fact that, though its duration is unpredictable, the condition almost invariably terminates spontaneously in complete recovery.

Surgical investigation on more than 30 cases of frozen shoulder has revealed that at least in most instances the subdeltoid bursa and underlying musculotendinous cuff are not involved and that, instead, tenosynovitis of the long biceps tendon and sheath is consistently encountered.

Adhesive tenosynovitis extends from the sheath into the outer quadrant of the shoulder joint proper, but the entire inflammatory process subsides spontaneously when the tendon becomes firmly attached to the bicipital groove and its motion is so obliterated.

The pathologic sequence underlying periarthritis provides a guide for the administration of conservative therapy and suggests a simple surgical approach when more rapid cure is desired.

RECENT EVOLUTION OF COLD AS AN ADJUNCT TO SURGERY

Robert T. McElvenny, M.D., Chicago
In ARCHIVES OF PHYSICAL THERAPY, 25;10;602, October 1944

During 1941 I presented a case of bilateral traumatic amputation through the thigh which was treated with chipped ice. In that paper another case was cited of gangrene of the leg

treated by cooling with ice and tourniquet, followed by amputation through the thigh with no anesthetic used except chilling. In the latter case operation was performed by Dr. McMahon at the Boston City Hospital during the summer of 1939. To my knowledge this patient was the first human being to be subjected to this procedure.

SUMMARY

The use of cold as a therapeutic agent has wide application. Little is known of the effect of cold on tissue from a pathologic and a physiologic point of view.

In this article an attempt has been made to set forth certain uses for cold as a therapeutic agent.

It is believed that cold therapy is here to stay as an adjunct in the treatment of various conditions, but just where its greatest value will lie only the future can determine.

The machine for cooling super-ice is illustrated (fig. 1) along with a model of some of the various packs containing super-ice (fig. 2). These packs may be used alone or in conjunction with ice. They have been fashioned to fit all parts of the body.

A few uses for super-ice in the medical field have already suggested themselves, for example in packs for the body and to prolong the efficiency of ice in such mechanical apparatus as oxygen tent equipment. Investigation of these uses has been begun but has not progressed far enough to warrant definite statements.

ARTIFICIAL RESPIRATION — MANUAL AND MECHANICAL

In THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 126;13;835
November 25, 1944

In all cases of asphyxia it is of paramount importance that artificial respiration be administered immediately. Loss of a minute may mean the difference between life and death. There is little hope of reviving a victim who has ceased to breathe for more than five to seven minutes and even less chance if he has been in a state of apnea for more than ten minutes. Effective artificial respiration may be applied by the acceptable manual methods — Schafer prone pressure and Howard-Silvester methods — or by mechanical means — respirator or resuscitator. The inhalator is a valuable adjunct to manual methods of artificial respiration. One disadvantage to mechanical apparatus, either resuscitator or inhalator, is that it is not always on the scene of an accident and precious first minutes or seconds may be lost waiting for its arrival.

All rescue crews, and also the public, should be taught a correct method of administering manual artificial respiration. The one most generally used is the Schafer prone pressure method, which may be administered effectively by one person.

In 1932 Dr. F. C. Eve of Hull, England, described a new method of artificial respiration which is unlike all previous methods mentioned. It is a rocking method, and the force of gravity causes the abdominal organs to shift, thus moving the diaphragm in and out like a bellows.

Inhalators provide an atmosphere of oxygen and carbon dioxide gas mixture slightly higher than the atmospheric pressure around the mouth and nose of the victim and are used in conjunction with an approved method of manual artificial respiration.

Resuscitators create positive and negative pressure by means of a mechanical appliance operated by the energy of the stored gas merely positive pressure only.

THE BEVERIDGE REPORT (Continued)

tice will still exist for those who wish to purchase it. Inasmuch as England already has a form of state controlled medical practice, probably most physicians would be employees of the state health department, presumably upon full time salaries. The practice of medicine in the United States would be limited to a comparatively few.

The Report mentions but carefully avoids the issue of post war pensions for veterans and those who return from the present conflict. This would suggest that the chairman has political ideas.

The recipients of these proposed benefits, and those who are to administer them (social workers, nurses, physicians and others) considering this document should evaluate the cost as well as the benefits. It is obvious that cost is not limited to dollars and cents alone, but includes restrictions in freedom of activity, which has been fundamental in American living.

Industrial Health

Committee On Industrial Health — Frederick W. Slobe, Chm., 2024 South Western Ave., Chicago, Frank F. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

NUTRITION IN INDUSTRY

Any practical plan for helping solve the problems arising in industrial nutritional service is always a forward step. Massachusetts has come to the fore in helping solve some of these problems. The following article by Mrs. Quindara Oliver Dodge is well worth careful study.

The average American worker is no longer solely interested in the size of his take-home pay envelope. He wants to LIVE as well! There is increasing evidence that he wants the satisfaction that comes from work enjoyment made possible by good plant working conditions and good employee morale. He wants to leave work with a margin of health buoyancy that permits a similar enjoyment of family and life off the job instead of being excessively fatigued and drained dry of all interest at the end of a working day. Along with this trend of desires among workers, the rank and file of Americans are also becoming increasingly aware of the significance of the role good food can play in helping them realize these objectives in better living.

IMPORTANCE OF IN-PLANT FEEDING

In-plant feeding is one of the means by which industries can anticipate this changing worker attitude toward living, since it can be one of the important means of achieving improved working conditions, improved employee morale, and job satisfaction. When these conditions exist in the plant, worker absenteeism and turnover are lessened and maximum production output so essential to full prosecution of the war results.

Under today's conditions of work and living, war workers may be caught in situations that make it difficult and sometimes almost impossible to supply themselves with the nourishing food they need. The needs of the war worker, both man and woman, for better nutritious food and improved health have not been lost on management and explain why in-plant feeding in industry expanded so rapidly this past year from less than 20 per cent of industrial workers receiving this food service before Pearl Harbor to 35 per cent at the end of 1943, or in actual numbers, 6.5 million workers.

The goal of the War Food Administration for in-plant feeding in 1944 is 12 million workers. The attainment of this goal on a national scale will prove completely effective in proportion as the day-by-day operation of each plant cafeteria typifies sound nutritional practices, which are integrated with an informed and practical in-plant nutrition education program in which workers and management alike take an active part. We know that to assure healthful nutritious meals on the job which adequately supplement similar quality meals eaten at home it is important that the worker shall want to select the right type of food. This requires education. Lacking such knowledge and desire on the part of the worker, the only other alternative is for industry to supply meal combinations that are scientifically planned to meet his nutritional needs and, by sound merchandising practices, to guide his selection. This adds one more burden to the already busy cafeteria manager with the responsibility to keep all costs in line on a low-profit margin basis and all guests satisfied regardless of limited food supplies and cafeteria employees who come and go.

Where the health and efficiency of the individual is of prime consideration, as it is in in-plant feeding, the plant cafeteria must be administered scientifically. This requires the application of modern scientific management principles and the sciences of foods and nutrition. A cafeteria director may ably apply the fundamentals of management, but may or may not have knowledge and skill in applying the sciences of foods and nutrition, since these are comparative newcomers to the food service field.

The administrative dietitian trained and experienced in management and foods and nutrition has been so essential to the war effort that our armed forces have depleted the civilian supply of such dietitians to a point where both industry and institutional or commercial demands must be met in many cases by other means for the duration.

Reprinted from the August 1944 issue of "INDUSTRY" Magazine . . . Official publication of the Associated Industries of Massachusetts.

A.I.M. OFFERS NEW SERVICE

The preparation of a Menu and Nutrition Service designed to give the harassed plant cafeteria manager a sense of security with respect to nutrition and to reduce time needed for planning, in order to increase available time for supervision of green and inefficient employees, is the Associated Industries of Massachusetts' answer for Massachusetts industries.

It is expected that the first issue will be distributed about September 1, one week before the date for which the material is planned for use in industrial cafeterias. The Service is prepared weekly by the Sub-Committee on Industrial Nutrition of the Massachusetts Committee on Public Safety, in cooperation with Associated Industries, the Women's Educational and Industrial Union, and the Massachusetts Division of occupational Hygiene.

During the developmental stages of the trial period, the Service will be successfully perfected in proportion as those who use it feel free to write the editor of INDUSTRY regarding questions its use has brought to mind, snags they run into, and the reactions of cafeteria employees and war workers to the Hearty Luncheon Specials. Any industry whose top management instructs their cafeteria director to make a weekly report to the editor on these points will be making an invaluable contribution to the Associated Industries of Massachusetts, to be of concrete, practical help to its members.

One question to which answers would be particularly helpful is the extent to which the Service is used. That is, was the menu for the full week put into use? — the suggested Hearty Luncheon Specials used only? — the box lunches sold at canteen centers? — any standardized recipe prepared? — How satisfactory was the resulting food product and how well liked? Have the types of dishes that you need been selected for standardization? Was the marketing or pricing or rationing data of value? Did you get any ideas from the Service that were applicable to your particular cafeteria situation? What were the parts of the service or its setup that gave these ideas to you?

THE WEEKLY MENU AND NUTRITION SERVICE

The Weekly Menu and Nutrition Service has been set up with all the needs of the war worker and the cafeteria manager in mind. The Service includes the chief tools for scientific administration of the cafeteria carefully integrated with a direct in-plant nutrition education program to be promoted by a Management-Worker Committee.

The Table of Contents includes:

In-Plant Nutrition Program
Nutrition Facts for In-Plant Nutrition Program
Sales Menus, Standardized Quantity Recipes, Calculated Ration Food Allowances, Total Cost of Recipe, and Cost Per Portion
Tabulation — Sizes of Service Portions and Recipe Yield for 100 Portions
Dietary Calculations for Daily Hearty Luncheon Specials
Wholesale Food and Market Situation — Massachusetts
Production Menu for Week
Directions for Use of Service

PREPARATION OF THE MENU AND NUTRITION SERVICE

The preparation of the weekly Service is based upon a year's work by the members of the Sub-Committee on Industrial Nutrition. The progressive development of the work proceeded through four main stages.

First, management surveys of representative industrial cafeterias in Massachusetts, made by members of the Sub-Committee on Industrial Nutrition, and inquiries reaching the chairman disclosed the need for the information contained in this Service.

Second, preparation of the basic material needed for making the Service available was carried on, under supervision of the Sub-Committee on Industrial Nutrition, by special committees of the Massachusetts Dietetic Association, as organized by its President. These committees began working in November, 1943, and completed their projects in June, 1944. The work involved active participation by some 35 dietitians with a total outlay of over 1000 hours of personal time spent, voluntarily taken from time normally available for their recreation and relaxation as a concrete contribution to the war effort.

Third, calculation of nutrient equivalents was made by the Simmons College senior students in Institutional Management for each of the quantity recipes that had been prepared by the recipe committee of the Massachusetts Dietetic Association.

Fourth, the Associated Industries of Massachusetts financed the cost of printing and mailing the trial issues and the full-time services of an administrative dietitian of superior ability and extensive experience to work with the Sub-Committee on Industrial Nutrition in whipping the Service into its final shape. The Women's Educational and Industrial Union provided office space and equipment and supplies, telephone and secretarial assistance.

Qualifications of education, training, experience, and personal attributes were set very high for this position of a full-time staff member of the Sub-Committee. This standard was deemed expedient to guarantee the accuracy and practicality of the weekly Service, and so that the administrative dietition might later serve as a specialist qualified to make management surveys of industrial cafeterias and be prepared to answer any questions from Massachusetts industries on the subject of cafeteria management or the use of the Menu and Nutrition Service.

The fact that the Executive Committee of the Associated Industries saw fit to support this activity for its initial trial period and make the Menu and Nutrition Service available to Massachusetts industries is an indication of the value of the material in the first week's Menu and Nutrition Service, which will be distributed a week before the Service is scheduled for use.

The complete Service, with a copy of this issue of "Industry," should be sent at once to the cafeteria manager, who will need the intervening week to be-

come familiar with its possibilities, to calculate market orders, and complete other essential planning.

The detailed description of the Service that hereafter follows should preferably be read with a copy of the first week's Service at hand.

WEEK'S PRODUCTION MENU

The production menu for the week is set up on one sheet of paper to show the seventeen menu items planned each day for Monday through Sunday. These items include one juice, one hearty soup, one meat, a meat extender or alternate, potato, two vegetables, a small salad or relish, one main dish salad, bread or rolls, one meat sandwich, one meat alternate sandwich, two fruits, fresh, frosted, canned or dried, a pudding, a cake or cookies, one ice cream, two pies, and beverages. Items in each of these listings are so carefully planned that in reality, although the cafeteria menu as a whole is noticeably shortened, many palatable and nutritious combinations can be selected by the worker as he passes along the counter.

These items for each day of the week are planned to help insure predictable costs, control food quality, simplify preparation and service, reduce waste of materials, equipment, and fuel and employees' time, take account of prognostication for surplus or scarce food supplies, and the marketing and transportation problems in general.

Undue repetition of menu items is avoided within a given week and from week to week so that interesting variety results, an attractive colorful counter is insured, and guest appetite is stimulated by the display. The menu items of the Hearty Luncheon Special are starred on each day's listings of the production menu; also, a selection from this listing is made at the bottom of the page to show a possible nutritious box lunch to be sold from canteen centers in the plant or to be given out as "Box Lunch Suggestions" to encourage workers to bring good lunches from home.

The production menu is the basis for the planning that has to be done by the cafeteria manager before the menu can be put into effect. It is the basis for the market order, the employee schedules, the food preparation and food service, as well as cleaning and sanitary control. A careful study of the production menu when it is first received, while keeping in mind available clientele, the equipment, utensils, and serving dishes, will enable the manager to decide how many of the daily menu items are practical for a particular cafeteria situation. One manager may only serve the Hearty Luncheon Special; another, serve the juice or soup, a sandwich, a pudding or pie, and a beverage; still another, serve half the items listed. In any event, the basic production menu lends itself to adaptation to practically any type of in-plant food service and to any situation of equipment, cafeteria personnel, or food refrigeration or transportation.

This menu also provides the foundation for cost control and sound merchandising practice.

DAILY SALES MENUS

The merchandising or sales menu for each day of the week lists a Hearty Luncheon Special priced to sell at 50c, except on Sunday when the sales price is 55c, that provides with natural foods one third of the day's nutritive essentials. The yardstick of nutritional adequacy is the "Recommended Dietary Allowances for Specific Nutrients," Food and Nutrition Board, National Research Council, as determined for a moderately active man and as printed in the March issue of INDUSTRY. In order to make these calculations and to plan luncheon combinations with a raw food cost percentage to sales price of 55-60%, quantity recipes were calculated and tested in two large group feeding departments.

The size of the portions based on the above assumptions are generous. These may be adjusted up or down by the cafeteria director in the individual plant to be adapted to the serving utensils and dish sizes, and to line up with the pricing policy already in existence. It is suggested that certain menu items should be available in two size portions to provide greater menu choice by the employee. For example, take the item soup; a 4 ounce portion in a cup would be adequate with a hearty meal, and a 12 ounce portion in a bowl could serve for the main dish of a lighter luncheon selection.

The Daily Sales Menu, in addition to the Hearty Luncheon Special, also includes a Light Luncheon and a Salad Luncheon suggestion on a single sheet. These two luncheons have not been priced, but have been carefully planned for color, texture, and taste appeal, and high nutritive value for that particular type of meal combination. These two combinations do not guarantee to provide one-third of the day's nutritive essentials.

The Monday menu of each week's Service lists under "Other Suggestions" the remainder of the menu items that appear for that day on the Production Menu. The Sales Menu for Monday thus gives a possible effective set-up for menu listing on a cafeteria menu display board that could be followed for each day's items during the remainder of the week; however, to reduce pages for the balance of the week, the Service is set up with two day's specials on a single page, and "Other Suggestions" for each day omitted.

At the foot of each Sales Menu, the approximate totals for the Hearty Luncheon Specials, based on 100 portions of the standardized quantity recipes, are given for Rationed Food Allowances and for the calculated raw food cost percentages.

STANDARDIZED QUANTITY RECIPES

Each standardized quantity recipe was calculated to serve approximately 100 portions. Mathematical accuracy and practicality of technique were checked before the recipe was actually prepared to test recipe ingredients and terminology and to determine the quality of the final product. The resultant food product was judged by a recipe-testing committee of graduate dietitians who ate a standard portion of the product, scoring it for quality, color, flavor and seasoning, texture or consistency, and palatability. The 100-portion recipe was, at the same time, prepared for use in serving as many as 1000 or more guests — men and

women — and its popularity and acceptance by the guests carefully noted as a final check for use in this Menu and Nutrition Service. Recipes were tested by the staffs of the Dining Halls, Graduate School of Business Administration, Harvard University, and the Nutrition Department, Massachusetts General Hospital, Boston.

The total raw food cost of the recipe and cost of a portion were calculated, based upon typical wholesale market prices in effect in Boston in August. Rationed Food Allowances that would be required for the ingredients in the recipe were determined according to July-August OPA Food Allowances for Group 4 requirements.

A summary tabulation of the sizes of individual service portions taken from the standardized recipes for each food item that has been planned in all the Hearty Luncheon Specials for that week has been made. This summary also includes the total amount of the prepared product necessary to serve 100 standardized portions. This tabulation of sizes of service portions and yield amounts will facilitate the use of the Production Menu and simplify planning by the cafeteria director.

Dietary Calculations of standardized quantity recipes used in the daily Hearty Luncheon Specials were calculated using "Food Values of Portions Commonly Used," Bowes and Church, 4th edition, for the source of data. When data for a given food was not found in Bowes and Church, the 1st edition of "Food Values in Shares and Weights," Clara Mae Taylor, was used. The nutritional adequacy of the daily Hearty Luncheon Specials was then calculated. After the total food value of each Hearty Luncheon Special was determined, the value for each nutrient — calories, protein, calcium, iron, Vitamin A, Thiamine (B1), Riboflavin, and ascorbic acid — was checked against the amounts recommended as necessary for good nutritional health for a moderately active man of 154 lbs. (70 kg.) by the Committee on Foods and Nutrition, National Research Council, in "Recommended Daily Allowances for Specific Nutrients."

In the event that it was found that the Hearty Luncheon Special failed to meet one-third of the day's nutritional needs for any one of the specific nutrients, a change was made in the food items of the Special to bring it up to the total nutrient value required for the luncheon.

Values for the following nutrients were not calculated — fat, carbohydrate, phosphorus, Vitamin D, and Niacin — neither for standardized recipes, nor for the the Hearty Luncheon Specials. Compilation of scientific results show that carbohydrate and fat are probably adequate if protein is adequate in kind and amount and that, if protein and calcium are adequate, phosphorus probably is also. The chief source of Vitamin D is sunshine and cod liver oil, since very few foods have it. In the case of Niacin, the standard is not based upon experimental evidence; a good many foods have yet to be analyzed for it; and finally, if Thiamin and Riboflavin are adequate in a meal, scientific evidence to date indicates that Niacin would probably be adequate also.

IN-PLANT NUTRITION PROGRAM

There is no better way to indirectly provide sound nutrition education than by serving quality food in pleasant, sanitary surroundings at a realistic price. This makes the daily operation of the plant cafeteria an important tool for better health and employee morale. But when to this indirect method of cafeteria promotion is added a careful direct program initiated by a plant nutrition committee, which includes film shorts, posters, and pay envelope stickers, then better health by better food really gets under way.

The Menu and Nutrition Service, week by week, develops a practical direct education program as a guide to the activities of the in-plant Management-Worker Nutrition Committee. It also includes reliable nutrition information consistent with proven research developments suitable for posters, use in plant papers, for pay envelope inclusion. It will give, from time to time, the names of effective posters, films, and other nutrition material, and addresses where they can be secured from Federal or state or commercial sources.

There will be a nominal charge of five dollars per week for the Service, based on the actual cost of its preparation. This cost includes the full-time services of an administrative dietitian whose salary has already been allotted in advance by the Executive Committee of Associated Industries, plus the actual cost of multigraphing and postage on the weekly mailings. The services of the various members of the Subcommittee on Industrial Nutrition and the state agencies assisting are, of course, donated without charge or fees of any kind.

Any industrial plant in Massachusetts, or for that matter, any Massachusetts employer of large groups of people, operating a company in-plant feeding system, may take advantage of the Service. It is not limited to A.I.M. members. The minimum trial period for those who wish to avail themselves of the Service is three months.

If a sizable number of plants ask for and take the Service, the price per week will be substantially reduced. The plan is a non-profit one, and aims simply to provide better meals for more industrial employees, through the latest methods of scientific management applied to large group feeding.

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES

By
Howard Wakefield, M.D., Chairman
Edwin F. Hirsch, M.D., Pathologist
ST. LUKE'S HOSPITAL
Chicago

1. CHRONIC RHEUMATIC AND SUBACUTE THROMBOULCERATIVE ENDOCARDITIS OF THE MITRAL AND AORTIC VALVES OF THE HEART.

A white woman aged 45 years entered St. Luke's Hospital on August 18, 1944 because of a fever of undetermined origin. Three months before, she had gone to Mexico for a short visit and there began to have a fever which ranged between 99° F. and 103° F. She had malaise, pain in her finger tips and eyes with the fever, and these were present when she entered the hospital. Several episodes of fever with diarrhea and continuing about a week had occurred during the past three years. There had been considerable loss of weight in three months and also some difficulty in speech. When admitted she was emaciated, her blood pressure was 104/60 mms. Hg., the pulse was 90 and respirations 16 per minute, and the temperature 99.8° F. The lungs had no unusual findings, the heart enlarged to the left had an apical systolic murmur and frequent extrasystoles. The abdomen had nothing unusual. The blood contained 3,200,000 erythrocytes and 8,450 leucocytes per cu. mm. and 9.6 gm. percent hemoglobin. The Widal and Abortus-Melitensis agglutination tests of the serum, the Brucella and tuberculin tests of the skin were negative. The sedimentation rate of the blood was increased (17.5 mm.), but the sugar, uric acid, total proteins and albumen-globulin ratio were unchanged. Many bacteriological and other examinations of the stools revealed nothing significant. The basal metabolic rate was 10 +. Pelvic and proctoscopic examinations disclosed no diseased structures and nothing significant was found in the urinary tract. An electrocardiogram on August 25 disclosed an auricular fibrillation. The patient's fever ranged from 99.8° to 101° F. She had a severe attack of tachycardia on September 18, 1944, became chilly and perspired freely. She grew worse and despite quinidine, oxygen and digifolin therapy died on September 20, 1944.

The main portions of the anatomic diagnosis of the postmortem examination (trunk) are:

Chronic rheumatic and subacute thromboulcerative endocarditis of the mitral and aortic valves of the heart;

Dilated chambers of the heart;

Ruptured, healed and contracted chorda tendinea of the posterior mitral leaflet of the heart;

Fibrous changes of the leaflets of the tricuspid valve of the heart;

Partially healed anemic infarct of the spleen;

Petechial hemorrhages of the epicardium, the pelves of the kidneys, and the mucosa of the small bowel;

Atelectasis of the lower lobe of the right lung;

Right chronic fibrous pleuritis;

Slight atherosclerosis of the aorta.

The body weighed 112 pounds and was 166 cm. long. The dilated heart weighed 370 gm.

There were no changes in the root of the pulmonary artery or in the leaflets of the pulmonic semilunar valve. The circumference of the pulmonic ring was 8 cm., the length of the right ventricle from the pulmonic leaflets to the apex was 9 cm. and from the tricuspid ring to the apex it was 7 cm. The myocardium of the right ventricle near the septum in front was 4 mm. thick. The foramen ovale was closed. The circumference of the tricuspid ring under slight tension was 15 cm. The free margin of the leaflets had slight fibrous tissue thickenings. The lining of the right and left auricles, auricular appendages and ventricles was smooth and glistening. The circumference of the mitral ring under slight tension was 12 cm. Both mitral leaflets were thickened by fibrous tissues. On the auricular surface of the free margin of the posterior leaflet was a granular hemorrhagic vegetation 1.5 cm. long, 0.7 cm. wide and protruding 4 mm. Opposite this on the anterior leaflet was a similar vegetation, 5 mm. above the free margin 6 mm. long, 5 mm. wide and projecting 5 mm. At the tip of the papillary muscle was a round fibrous nodule 2 mm. in diameter and beneath the posterior leaflet near the attachment was a similar nodule of fibrous tissue 4 mm. in diameter. These corresponded to the attachment and insertion of a ruptured and healed chorda tendinea. (Figure 1.) The length of the left ventricle from the mitral ring to the apex was 9 cm. and from the attachment of the aortic leaflets to the apex it was 11 cm. The circumference of the aortic ring was 9 cm. The free margin of the leaflets of the aortic valve was thickened slightly by fibrous tissues and the posterior had a loosely adherent red granular vegetation 2 mm. in diameter. The myocardium of the lateral wall of the left ventricle ranged between 1.2 and 1.7 cm. in thickness. Surfaces made by cutting were red-brown fibrillar tissues with cloudy swelling. The lining of the coronary arteries was smooth, the channels widely patent. The hyperemic kidneys weighed 130 and 125 gm. and had no other significant changes. The spleen weighed 100 gm. In the anterior edge was a depressed infarct 1.5 cm. long, 4 by 3 mm. in its other dimensions. Cultures of the heart's blood and pericardial fluid were sterile.

Figure 1. Case 1. Photograph illustrating the chronic fibrous and subacute thromboulcerative endocarditis of the anterior and posterior leaflets of the mitral valve. Note the small fibrous nodule at the tip of the papillary muscle.

The liver weighed 1525 gm. Histologic examination of the myocardium demonstrated focal (embolic) fibroplastic myocarditis and along the blood vessels scattered collections of large mononuclear phagocytes (Aschoff nodules).

COMMENT

The postmortem examination disclosed that the cryptic sources of the fever and other vague clinical symptoms of this patient were associated with an endocarditis of the mitral and aortic valves. The slowly progressive disease had existed for considerable time and the lesions of the mitral valve had evidence of reparative tissue reactions. The rounded scar tissue nodules of the posterior leaflet and papillary muscle were fibrous residues of a destroyed chorda tendinea.

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2. CARCINOMA OF THE OESOPHAGUS WITH TRACHEAL FISTULA AND TUBERCULOUS BRONCHOPNEUMONIA.

A white male aged 64 years entered St. Luke's Hospital on August 8, 1944 because of progressive difficulty in swallowing, a loss of 30 pounds in weight and weakness during five months. He was emaciated, but the blood and urine examina-

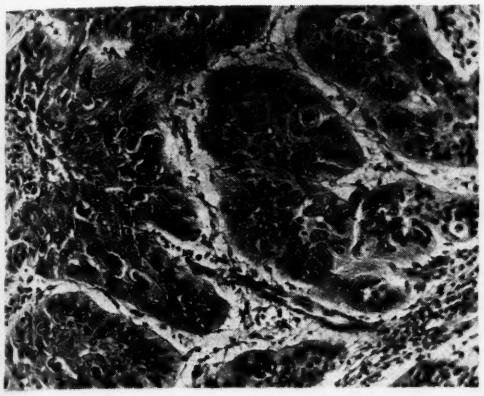

Figure 2. Case 2. Photomicrograph illustrating the squamous cell carcinoma in the biopsy tissues removed from the oesophagus. (x-198)

tions revealed no changes. Esophagoscopy disclosed an ulcerated lesion in the upper portion of the oesophagus which a tissue examination established to be squamous cell carcinoma. (Figure 2.) The patient was discharged from the hospital and received roentgen ray therapy. His dysphagia progressed and he returned to the hospital September 5, 1944 unable to swallow. His lungs had rales and he had a fever of 101° F. On September 19, a gastrostomy was done, pneumonia developed and a roentgen ray film of the chest indicated an extensive tuberculosis of the lungs. The patient died September 30, 1944.

The essentials of the anatomic diagnosis are:

Ulcerated carcinoma of the upper third of the oesophagus with perforation (fistula) of the trachea;

Metastatic carcinoma of the peritracheal and mediastinal lymph nodes;

Extensive bilateral tuberculous bronchopneumonia;

Bronchiectasis of the lungs;

Chronic catarrhal and acute exudative bronchitis;

Draining surgical gastrostomy of the stomach; etc.

The body weighed only 88 pounds and was 167 cm. long. Both pleural spaces were obliterated by fibrous tissues. On the anterior wall of the oesophagus 4.5 cm. below the level of the vocal cords was an ulcerated carcinoma 3.2 cm. long (Figure 3) and 2.5 cm. wide with a fistulous opening into the trachea in the center 3 mm.

Figure 3. Case 2. Photograph illustrating the ulcerated carcinoma of the oesophagus with perforation into the trachea.

in diameter. There were several lymph nodes in the tissues around the oesophagus opposite the ulcerated carcinoma. The right lung weighed 600 gm., the left 800 gm. Both lungs were extensively consolidated. Surfaces made by cutting had granular grey-yellow regions distributed around the bronchioles 0.5 to 1.5 cm. in diameter. The intervening lung tissues were hyperemic. Examinations of the other viscera had minor changes and incidental to the carcinoma. The ulcerated lesion of the oesophagus in histological preparations was a squamous cell carcinoma. Regional lymph nodes had caseous tuberculosis and the lungs an extensive tuber-

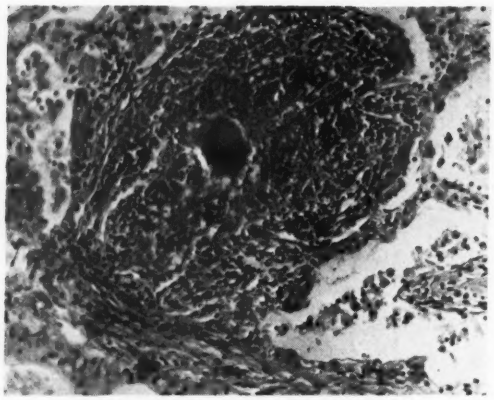

Figure 4. Case 2. Photomicrograph illustrating the tuberculous bronchopneumonia of the lungs. (x-198)

culous (Figure 4) bronchopneumonia.

COMMENT

The clinical symptoms of dysphagia and loss of weight are common with carcinoma of the oesophagus. This cancerous growth caused a tracheal fistula and course of disease was complicated by an extensive tuberculous bronchopneumonia of the lungs.

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3. CARDIO-RESPIRATORY COMPLICATIONS WITH CHRONIC TUBERCULOSIS OF THE LUNGS.

A white male aged 52 years entered St. Luke's Hospital on August 22, 1944 because of severe dyspnoea for six weeks and fatigue for several years. In December 1943 he had pneumonia but recovered promptly. For a week in June 1944 he had diplopia and a tendency to veer to the left while walking. He was treated in a hospital and while there had an episode of severe dyspnoea following a spinal puncture. No diagnosis was made at this time. Later in the summer a similar episode of dyspnoea resulted in a short stay in a hospital. He had been short of breath for many years. His blood pressure was 204 mm. Hg. systolic and 114 diastolic, the pulse and respiration rates per minute were 98 and 22 respectively, and his rectal temperature was 100° F.; he had a left nystagmus. The right side of the chest was retracted and flattened, had limited expansion, decreased tactile fremitus, dullness with percussion, and decreased breath sounds. The left lung had many rales, the enlarged heart had a fast rate, and the liver extended below the costal margin. The blood had 4,720,000 erythrocytes and 12,950 leucocytes per cu. mm., the hemoglobin was 13.6 gm. percent. The non-protein nitrogen content was unchanged. The Kahn test of the blood was negative. The urine had over 50 mg. percent albumen. The sedimentation rate was increased (20.5 mm.). The electrocardiogram demonstrated tachycardia and changes indicating myocardial damage. Roentgen films revealed a calcified right empyema and retraction of the chest. Some infiltrations of the left lung were considered inflammatory. The patient was emotionally unstable, his dyspnoea grew worse and during the last week of life he required continuous oxygen therapy and diuresis at intervals. Death occurred October 2, 1944.

The essentials of the anatomic diagnosis of the postmortem examination (trunk) are:

Chronic right obliterative and calcified fibrocaseous tuberculous pleuritis with deformity of the chest;

Fibrocaseous tuberculosis of the tracheobronchial lymph nodes;

Solitary nodular encapsulated fibrocaseous tuberculosis of the lower lobe of the left lung;

Acute fibrinous and chronic obliterative fibrous pericarditis;

Hypertrophy of the myocardium of the right ventricle of the heart;

Encapsulated nodular tuberculosis of the liver and spleen;

Atherosclerosis of the aorta and its main branches.

The body weighed 110 pounds and was 165 cm. long. A large left duodenojejunal pouch 10 to 15 cm. in diameter and extending to the left behind the descending colon contained loops of small bowel, not adherent to the lining. The contracted right lung was bound firmly to the mediastinum and parietal pleura. There were no adhesions between the emphysematous left lung and the chest. The pericardial sac was obliterated in front by fibrous and behind by fibrinous adhesions. The epicardium opposite the fibrinous adhesions was granular and hyperemic. (Figure 5.) A small amount of blood stained pericardial fluid was in the interstices. The calcified plaque in the right parietal pleura was 21 cm. long, 10 cm. wide

Figure 5. Case 3. Photograph of the pericardial surface of the opened heart illustrating the fibrous and fibrinous pericarditis.

and 2 cm. thick. The contracted right lung weighed 580 gm. The pleura posteriorly and laterally was thickened and calcified. In a crevice between it and the parietal pleura was soft caseous material. Medially the torn adhesions were fibrous. The lining of the bronchus was markedly hyperemic, the lumen dilated and the wall thickened. The entire lung was subcrepitant and atelectatic. The left lung weighed 800 gm., the parietal pleura was smooth. The lung tissues were hyperemic and subcrepitant. An apical fibrous scar was 4 by 3 cm. and 1 to 2 mm. thick. On the medial surface of the lower lobe was a retracted scar and beneath this a fibrocaseous node 1.4 cm. in diameter. Nearby and extending linearly toward the hilum were several other grey nodules 2 to 4 mm. in diameter. Surfaces made by cutting were hyperemic, subcrepitant tissues moist with large amounts of blood stained fluid. The tissues in the posterior and inferior portions were finely granular. The heart weighed 505 gm. The pulmonic leaflets were thin, the ring under slight tension was 9.5 cm. in circumference. The length of the right ventricle from the pulmonic leaflets to the apex was 9 cm. and from the tricuspid ring to the apex it was 7.5 cm. The myocardium of the right ventricle near the septum in front was 1 cm. thick. The lining of the right and left auricles, auricular appendages and ventricles was smooth. The tricuspid ring was 14 cm. in circumference, the mitral ring 11.5 cm. The left ventricle from the mitral ring to the apex was 8.5 cm. and from the aortic leaflets to the apex 9.5 cm. There were fibrous and fatty changes of the anterior mitral leaflet. The circumference of the aortic ring was 7.5 cm., the leaflets were thin, and the right cusp was fenestrated. Surfaces made by cutting the myocardium had fatty changes but no infarcts. Histologically, the lungs and tracheobronchial lymph nodes had focal fibrocaseous tuberculosis. There was marked fibrous induration, chronic catarrhal bronchitis and chronic passive hyperemia of the lungs. The muscle fibers of the myocardium were hypertrophied. Tuberculous lesions were not found in the granulation tissues beneath the fibrinous exudate covering the epicardium.

COMMENT

The clinical symptoms of this patient were mainly cardiac due to resistance in the pulmonary circulation or gas exchange resulting from the chronic tuberculosis of the lungs and the functional embarrassment caused by the chronic fibrous and acute fibrinous pericarditis. The extent of these changes were not fully determined by physical examination although the cardiac symptoms were correctly interpreted as being not due to a primary disease of the heart.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

★ WAR SERVICE ACTIVITIES ★

COOK COUNTY

A letter recently came from Harold H. Hill formerly of Oak Park who is now stationed with the Marines in one of the Pacific Islands. He says "Will you please have the Illinois Medical Journal sent to my present address? It has been following me 'round Robin Hood's Barn. Thank you. I read it avidly. My regards to Doctor Camp, Doctor Hutton and others I knew and worked with." Many Illinois doctors came to know Doctor Hill when he was in charge of the obstetrical post-graduate conferences in the state.

Major Isadore Pilot, MC, is now Chief of Laboratory Service ASF Bruns General Hospital, Santa Fe, New Mexico.

Word has been received of the promotion of Paul Andrew Campbell, Chicago, from Lt. Col. to Colonel.

Lt. (j.g.) Francis Ambrose Laggorio, Jr., of Chicago, battalion surgeon of the 7th marines, 1st division, has been commended for heroism in the bitter fighting on Peleliu Island last September and October by the marines' commanding officer, Lt. Gen. H. M. Smith. The citation says "Lt. Laggorio organized and directed stretcher bearers to the front and to the rear . . . . . He . . . . contributed greatly to the ultimate combat efficiency of the battalion." Lt. Laggorio is a graduate of Dartmouth and Loyola Medical School.

Col. Marion H. Barker, former assistant professor of medicine at Northwestern University, has been awarded the Legion of Merit medal for an "outstanding contribution to medical science during this war." He was cited for his "keen insight in devloping methods of treatment of patients suffering from a strange liver malady." The award was presented by Maj. Gen. M. C. Stayer.

The Chicago News of January 15th carried a story about the 27th Evacuation Hospital, the University of Illinois Hospital, under the command of Col. Charles B. Puestow. The unit landed in south France August 29 and went to work near Aix-en-Provence caring for wounded from Marseilles, Toulon and the entire area. They moved up and have been following the 7th Army ever since. The unit is made up of nine particularly fine surgical teams composed of three surgeons, 12 surgical nurses and five nurse anesthesits. Among the Illinois doctors connected with this unit, in addition to Doctor Puestow, are William G. Gillesby of Effingham, Robert E. Bedard of Kankakee, James W. Lewis of Evanston, Daniel E. Bowers of Peoria, Clifford L. Carter of Ottawa, James H. Cross and Roland R. Cross Jr. of Dahlgren.

KANE COUNTY

Clarence L. Gardner of Aurora has been promoted from Major to Lt. Col.

MC LEAN COUNTY

Seymour Fisher, formerly medical director of the Illinois Soldiers' and Sailors' School in Bloomington, is now executive officer of the Valley Forge General Hospital. He has recently been promoted from the rank of Major to that of Lieutenant Colonel.

GENERAL

COOK COUNTY

Helen M. Kostka who has practiced in Chicago since 1921 has gone to Seattle, Washington where she has become associated with the med-

ical department of the Boeing Aircraft Company.

Lt. Col. Lloyd G. Lewis, MC, Washington, D. C. addressed the Chicago Urological Society on January 25th, subject "Treatment of the Neurological Bladder."

The Baruch Committee on Physical Medicine recently announced the granting of a sum of $185,000 for further advancement of the program in physical medicine and the physical rehabilitation of those disabled in the war. The sum has been divided into seven grants, with the University of Illinois receiving $15,000 for the inauguration of a teaching program in physical medicine at the University's medical school. Other recipients are: The Massachusetts Institute of Technology and the Medical Schools of Marquette University, Harvard, University of Southern California, Minnesota and Iowa.

Seven Chicago doctors have been named members of an advisory council to assist the Hematology Research Foundation in its study of blood disorders.

They are Dr. Raphael Isaacs, head of the hematology department of Michael Reese Hospital; Dr. Louis R. Limarzi, University of Illinois; Dr. Andrew C. Ivy, professor of physiology, Northwestern University; Dr. Ludvig Hektoen, Chicago Tumor Institute; Prof. Anton J. Carlson, professor-emeritus of physiology, University of Chicago; Dr. Italo F. Volini, dean of Loyola Medical School; and Dr. Otto Saphir, pathologist, Michael Reese Hospital.

LA SALLE COUNTY

John W. Howser will present a talk on "Intestinal Obstruction" before the LaSalle County Medical Society at the Kaskaskia Hotel, LaSalle on the evening of March 8th.

LIVINGSTON COUNTY

The Livingston County Medical Society held a dinner meeting December 5th at the American Legion Billet, Pontiac. Watson Gailey of Bloomington spoke on "A Review of Eye Diseases" and H. W. Wellmerling of Bloomington spoke on "Internal Fixations of the Femoral Neck Fractures."

MACOUPIN COUNTY

The Macoupin County Medical Society met on January 30th at the Evangelical Hall in Carlinville. Walter Stevenson, Councilor of the 6th District showed films on his travels in India.

MADISON COUNTY

Madison County Medical Society met on January 5th at the Collinsville Memorial Library, Collinsville. Armand C. Forster, Instructor in Surgery at St. Louis University School of Medicine spoke on "Surgery of the Lower End of the Gastrointestinal Tract."

PEORIA COUNTY

Peoria County Medical Society met on February 6th at the Pere Marquette Hotel, Peoria. Andrew J. Sullivan spoke in behalf of the Association of American Physicians and Surgeons, presenting the purposes and object of the Association in its efforts to combat the socialization of medicine.

VERMILION COUNTY

At a recent meeting of the Vermilion County Medical Society held in Danville, J. Frank Jennings was awarded the 50 year button and certificate of the Illinois State Medical Society after concluding 50 years in the practice of medicine. He made a short address on his outstanding experiences. Dr. Jennings has practiced in Chrisman the past 20 years, coming there from Scottland where he located September 22, 1894 following graduation from Starling Medical College, Zanesville, Ohio, in March of that year.

MARRIAGES

CHARLES A. BECK to Miss Ruth Brandstetter, both of Chicago, December 10.

MARTIN ROBERT BROMAN, Evanston, Ill., to Mrs. Vivian Lawrence Pratt of Manchester, N. Y., October 15.

THOMAS J. NAUGHTON to Miss Elizabeth Roughan McMahon, both of Chicago, November 27.

DEATHS

RAYMOND LEO ABRAHAM, Chicago; Loyola University School of Medicine, Chicago, 1933; member of the American Medical Association; served an internship at St. Elizabeth Hospital; commissioned a first lieutenant in the medical corps, Army of the United States, on June 3, 1942; later promoted to captain; died at the Charleston port of embarkation, South Carolina, Sept. 27, 1944, aged 38, of coronary thrombosis.

NATHANIEL H. ADAMS, Oak Park; Northwestern University Medical School, 1896. Died January 20, 1945, aged 74.

JUNIUS S. BILLINGS, retired, White Hall; National University of Arts and Science Medical Department, St. Louis, 1896. Had practiced medicine in Athensville before coming to White Hall in 1916. Died January 13th, aged 77.

EDWIN T. BLACK, retired, Hountsville; Rush Medical College, 1881. In 1931, was awarded the "Fifty Year Pin" by the Illinois State Medical Society. Retired in 1941 after 60 years of medical practice. Died December 10th, aged 86 years.

CAPT. WALTER E. BLOCK, Chicago; Chicago Medical School, 1930. Awarded silver star for heroism in evacuating wounded after the Normandy landing, was killed in action in Germany, December 8, 1944, aged 40.

WILLIAM D. H. BROWN, La Grange, Ill.; National Medical University, Chicago, 1902; died in Chicago December 6, aged 86, of multiple lacerations of the right lung with massive hemothorax due to multiple fracture of the ribs as the result of a fall from a porch.

HOWARD J. BUCHANAN, retired, Monmouth; Northwestern University Medical School, 1919. Was representative of the Massachusetts Mutual Life Insurance Company in Monmouth for 17 years. Died following a series of heart attacks, on January 2nd, aged 55.

ROBERT IRVING BULLARD, Springfield; University of Pennsylvania School of Medicine, 1903. Medical leader and specialist in eye, ear, nose and throat in Springfield for many years. Was an early organizer of the American Legion following first World War in which he served as a major in the medical corps. Spent 7 years as instructor of nurses. Died December 25th in St. John's Hospital, aged 67.

JOHN A. C. BUSBY, Oak Park; University of Nebraska Medical School, 1921. Served as executive of the obstetrical staff of West Suburban Hospital. Died of a cerebral hemorrhage, January 5th, aged, 52.

IRA FRANK, retired, Highland Park; University of Illinois College of Medicine, 1899. Was ear, nose and throat specialist and on staff of Michael Reese Hospital. Died January 20th at the age of 68.

RUDOLPH M. HECHT, Chicago; University of Illinois College of Medicine, Chicago, 1933; member of the American Academy of Dermatology and Syphilology and the American Association for the Study of Allergy; served an internship at the Michael Reese Hospital; commissioned a captain in the medical corps, Army of the United States, on Sept. 28, 1942; died in the European theater of operations September 16, aged 38, of injuries incurred in a vehicle accident.

ATO C. HOUSH, East St. Louis; Missouri Medical College, St. Louis, 1899. As a member of the staff at St. Mary's Hospital, East St. Louis, he served 12 years as historian of the St. Clair County Medical Society and wrote the organization's 78 year history. Was chief of staff at Christian Welfare Hospital. Died January 14th, aged 71.

HARRY LEE HOWELL, Bloomington; Rush Medical College, 1904. Coroner of McLean County; served on the staffs of the three Bloomington-Normal Hospitals. Had practiced medicine 40 years; was naval lieutenant during World War I serving 19 months aboard troop and hospital ships in the Atlantic. Was instrumental in organizing the Bloomington-Normal Health Council in 1940. Helped found the Louis E. Davis post, American Legion and served as its second commander. Died December 16th, aged 66.

ROBERT MCCURDY KENNEDY, Elgin, Ill.; Northwestern University Medical School, Chicago, 1938; diplomate of the National Board of Medical Examiners; served an internship at City of Detroit Receiving Hospital, Detroit; formerly a medical missionary to India; commissioned a lieutenant (jg) in the medical corps, U. S. Naval Reserve, on Oct. 27, 1943; drowned at sea when the ship sank in a hurricane in the Atlantic area Sept. 13, 1944, aged 33.

SIGMUND KRUMHOLZ, Chicago; University and Bellevue Hospital Medical College of New York, 1899. Was instructor in nervous and mental diseases at Rush Medical College from 1901-17; attending neurologist and psychiatrist at Michael Reese Dispensary, 1903-12; associate professor of neurology at Northwestern Medical School from 1917 to 1933. At the time of his death, was professor and chairman of the department of neurology and psychiatry at Chicago Medical School. Died January 26, at the age of 73.

JULIUS E. LACKNER, Highland Park; Rush Medical College, 1910. Senior attending gynecologist and attending obstetrician at Michael Reese Hospital; on staff of Highland Park Hospital. Died following an illness of two months, January 3rd, at the age of 57.

GAYLE HAROLD LAYMON, St. Joseph, Ill.; Chicago Medical School, 1934; member of the American Medical Association; served an internship at the South Shore Hospital, Chicago; commissioned a first lieutenant in the medical corps, Army of the United States, on Dec. 28, 1942; began active duty on Jan. 13, 1943; later promoted to captain; died in Kodiak, Alaska, April 9, 1944, aged 42, as the result of cerebrovascular disease.

JOHN THOMPSON MANIERRE, Chicago; Northwestern University Medical School, 1894. Was a member emeritus after 50 years active membership in Illinois State Medical Society. Was on staff of Illinois Masonic Hospital. Died on the 75th birthday, January 12th.

DANIEL A. ORTH, Wheaton; Rush Medical College, 1896. President of the staff of Columbus Hospital. Died, aged 72, on January 3rd.

EMIL A. SCHLAGETER, Chicago; Chicago College of Medicine and Surgery, 1914. Supervising health officer of the Chicago Board of Health. Was a Captain in the medical corps in World War I. Died January 18th at the age of 61.

HARRY SCHULTZ, Elwood; Chicago College of Medicine and Surgery, 1917. Was first lieutenant in World War I and served as admitting officer at Camp

Dix, N. J. From 1928-39, was in private practice in medical and industrial surgery in Elmhurst. In 1941, was named head of the medical department during the construction of the Kankakee Ordnance works and upon completion of the Elwood plant was named director of the Medical Department. Died of coronary thrombosis, aged 52, December 17th.

WILLIAM F. SCOTT, Maywood; Rush Medical College, 1892. Chief of staff and head of the department of surgery at Oak Park Hospital. Started practicing in Marengo, Iowa, but moved soon afterward to Maywood. Died, aged 75 in his home on January 18th.

JOHN N. VOLICOS, Chicago; National Medical University, Chicago, 1896. First Greek physician to practice medicine in Chicago. Died December 24th, aged 79.

ALBERT ROBERT WEINGLASS, former resident physician at Chicago Memorial Hospital; University of Illinois College of Medicine, 1941. A fellow of Harvard University and engaged in research and teaching at Thorndike Memorial Laboratory. Died January 3rd, age 27 years.

EDWARD JAMES WHEATLEY, Danville; Drake University College of Medicine, Des Moines, Iowa, 1910. Was chief surgeon at the National Home for Disabled Volunteer Soldiers in Danville. Died in his home December 30th, aged 64.

AMERICAN LEGION PLANS PROGRAM FOR MEDICAL SERVICE

The American Legion recently announced a program to mobilize the highest medical intelligence of America to advise on the mental and physical health needs of returning veterans. Nine eminent physicians and surgeons were named to a national board that will counsel the Legion in its service to discharged men. They are Col. Leonard G. Rowntree, chief of the selective service division and internationally known authority on glandular disturbances, named as chairman; Major Gen. George F. Lull, deputy surgeon general, U. S. Army, and Rear Admiral William C. Agnew, assistant surgeon general, U. S. Navy, both advisers in general medicine; Col. Esmond R. Long, Office of the Surgeon General, U. S. Army, adviser in pulmonary disease; Capt. Raymond C. Wells, U. S. Navy, assistant chief of the Selective Service Medical Division, adviser in dentistry; Lieut. Col. Louis H. Renfrow, executive officer, Selective Service Medical Division, as assistant chairman of the board; Lieut. Col. Charles W. Mayo, adviser in surgery; Dr. William D. Stroud, professor of cardiology, University of Pennsylvania, adviser in heart ailments, and Dr. Winfred Overholzer, superintendent of St. Elizabeth's Hospital, Washington, D. C., adviser in psychiatry. Particular attention will be given by the board to the handling of psychoneurotic cases.

National Commander Edward N. Scheiberling stated that similar medical advisory groups are projected for each state, and it is planned, as the program progresses, to appoint post surgeons in each community having a Legion post.

P. R. N.

The Jocular Jingles of C. G. F.

by

Charles G. Farnum M. D.
Peoria, Ill.

THE AGE OF A MAN

It would seem,
that there is
no escape
from the crowd
that constantly,
and with
much dogmatism,
asserts
and reasserts
that a man
is as old
as his arteries.

Another group
wags its head wisely
and proclaims
in a tone
of finality
and positivity
that a man
is as old
as his kidneys.

And a flock
of pollyannas
cackle at us
in staccato
and cresendo
that we are,
and always will be,
as old as
those with whom
we associate.

And the horde
of persons
who pursue golf balls
over assorted hills
and discover
that by the time
they have reached
the fourteenth hole
the old dogs
begin to
whine and growl.

will assert
that a man
is as old
as his feet.

And the mob
of baseball fans
and fight followers
remind us
with vehemence
and in no uncertain language
that the reason
fighters and ball players
are old men
at thirty-five
is because
the punch has faded
from the old wing
or the underpinning
is faltering under the strain
and for those reasons
a man is as old
as his arm
or his legs.

We also encounter
those hard-headed
two-plus-two persons
who will point
to a birth certificate
or the record
in the family Bible
and will proclaim
in raucous voice
that that is the age;
no younger,
no older,
arguments are not
tolerated.

But fortunately
we have also those
of philosophical mind
and broader mentality
who listen patiently
to all this prattle,
smile indulgently,
carefully evaluate
their physical short-comings,
and proceed
on their way,
without resentment,
without apprehension
and without worry,
and whose very manner
of living proclaims
that, after all,
a man is only as old
as his state of mind
and his wisdom
in living within
his limitations.

And it is
to these
that life gives
her largest bounty
and her greatest measure
of longevity
and whose pathways
are those
of tranquility
and contentment
and peace.

CYNICAL CINQUAINS

In March

A few
brave birds return,
deceived by zephyry breeze,
find snow and sleet and ice in turn
and freeze.

ADVENTURE

If you ever care to venture
On a rather rare adventure,
Then just follow us about from day to day:
And we promise as conclusions,
That you lose some pet illusions
And will look at life a wholly different way.

For the folks admired the keenest
You will often find the meanest
And they make you lose a lot of faith in man.
But all this is compensated
By a host all underrated
Who are members of bravest hero clan.

Oft the ones you think the gamest
Under stress become the lamest,
They fold up because they're quitters or are crooks.
There are others who face duty
In a way of startling beauty —
You can't tell what's in a man by how he looks.

In our work the thin veneering
And all pretense domineering
Have come off and we see people in the raw:
And it's keenly satisfying,
With the living or the dying,
That the most are purest gold without a flaw.

So you must not judge your fellow
Nor conclude that he is yellow,
Not until you walk with him o'er pathways rough:
For in spite of your surmising
You will find him most surprising
And may learn that he is made of finest stuff.

ruary, 1945

urn

day:

vay.

man.

e crooks.

looks.

raw:

flaw.

rough:

stuff.